USER'S
MANUAL CE

FRACO

ACT8

Cylindrical Technology

MAST CLIMBING WORK
PLATFORMS

98030280 rev.06 (MU-ACT8-AN-CE 05-2010)

TABLE OF REVISIONS

Revision	Description	Date	Page	Comment
00	Issues for production	x	All	New product
01	General revision	04/2007	All	x
02	General revision	01/2009	All	Added format CE
03	General revision	05/2009	All	Revision of all information
04	General revision	07/2009	All	Revision of all information
05				
06				

Congratulations!

You are about to use the excellent **FRACO** hydraulic mast-climbing work platform system! This system stands out for its safety, stability and flexibility.

The instruction manual and safety rules presented on the following pages will safely guide you through all the possibilities of this system. The platform cannot be sold or rented without this user's guide.

Les Produits FRACO Ltée reserves the right to modify the platform or its manual without notice, and will not assume any responsibility for any prejudices that may occur. The **ACT** system meets the **ANSI / SIA A 92.9-1993, CSA and CE EN 1495:1997F, CAN / CSA-S16.1-94.**

Les Produits FRACO Ltée
91 Chemin des Patriotes
St-Mathias-sur-Richelieu
Québec, Canada, J3L 6B6
www.fraco.com
fraco@fraco.com

St-Mathias-sur-Richelieu : (450) 658-0094
Canada : 1-800-267-0094
Europe : +33 (0) 3.44.91.03.53
U.S.A. : 1-888-372-2648
ou par téléc. au : (450) 658-8905

FRACO is an ISO 9001 registered company

Warranty

Les Produits FRACO Ltée, hereafter referred to as **FRACO**, guarantees its new products against any material or manufacturing defects for a period of one year from the date of delivery to the first user, or for a period of 12 months from the date of delivery to the accredited dealer.

FRACO's obligation and liability in virtue of this warranty are expressly limited to repairing or replacing with re-machined or new materials, at **FRACO**'s discretion, any part which appears to have a material or manufacturing defect. These parts shall be supplied free of charge according to the FOB terms of the dealer or user, at **FRACO**'s discretion.

Depending on the provisions of the service policy in force at the time of delivery, and in virtue of the provisions of this warranty, **FRACO** shall pay the installation cost for any repaired or replaced part. **FRACO** shall not bear any labor costs unless written authorization is obtained before the work begins.

This warranty does not apply to parts or accessories for products that were not manufactured by **FRACO** and which are covered by a warranty from their own manufacturer, nor does it apply to normal maintenance (for example, motor tuning) or to parts used in normal maintenance. **FRACO** offers no other warranty, either express or implicit, and gives no guarantee of commercial value or pertinence for a given application.

FRACO's obligation in virtue of this warranty does not cover customs duties, taxes or any other fees, nor does it bear any liability for direct, indirect, incidental or resulting damage or delay. If **FRACO** so requests, the products or parts for which a warranty claim is made must be returned to **FRACO** at the expense of the dealer or owner.

Any improper use, including use of the product after defective or worn parts have been discovered, shall cancel this warranty. Other improper use that shall result in the cancellation of the warranty includes using the product beyond its rated capacity, substituting other parts for **FRACO**-approved parts (including anchors), or any third-party alterations, modifications or repairs which **FRACO** deems to have damaged the product.

	Model	Date	Bulletin n°
Technical	**ACT-4, ACT-8, 20K, MP-8000.**	2009-10-21	U-G-0011-A

FRACO

Procedure for mast lifting operation
Add to FRACO platforms User's manual for models indicated above

Please read the following carefully and insert the present technical service bulletin in your FRACO user's manual.

Reminder:

1. During mast lifting operation, the mast section assembly should be no greater than a maximum length of 40 feet (12.2 meter) in order to eliminate the ''curving'' risk of the mast during lifting or dropping operation of the mast on the ground. (See figure 1)

2. The end of mast section can withstand a maximum load of 6500 pounds (2950 Kg.). (See figure 2)

Figure 1

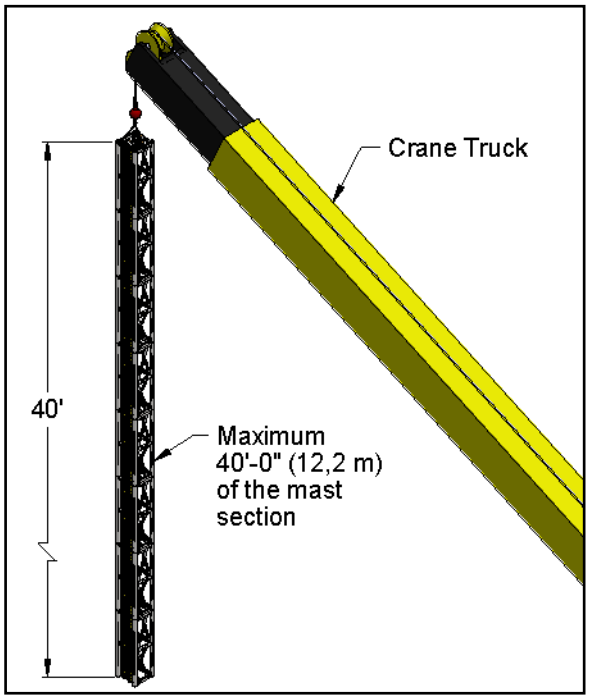
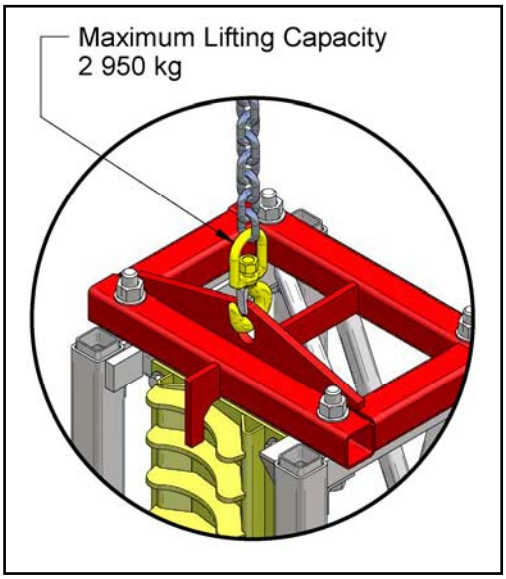
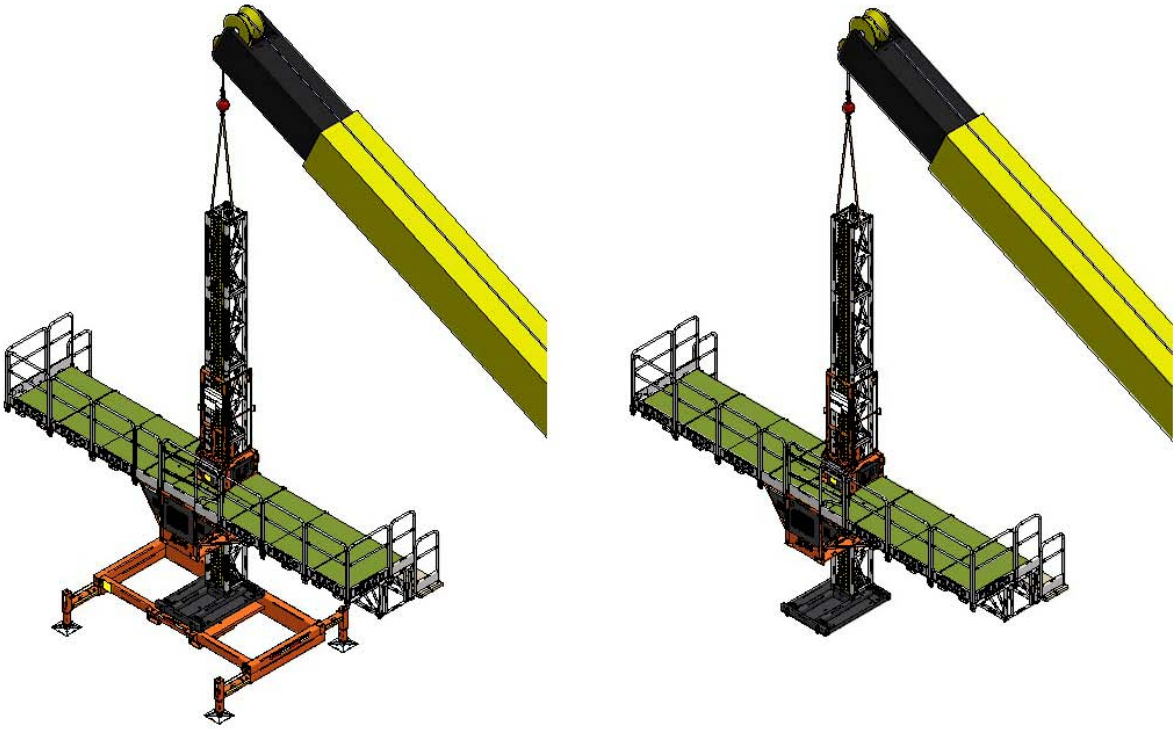


Figure 2



It is possible to proceed with lifting operations of up to 15 000 pounds (6804 Kg) by using the method described in Steps 1 through 3, on the following pages of the present document. The lifting capacity of 15,000 pounds (6804 Kg.), is valid only if the load being lifted remains in a vertical position at all times.



Maximum weight of assembly: 15 000 pounds (6804 Kg).

Important:

1. This method is applicable for the ACT-4, ACT-8, 20K and MP-8000 (Transporter)
2. Any installation or dismantling operation of FRACO equipment must be performed by a certified installer (level 2A or 2B).
3. It is the responsibility of the person in charge of the lifting operation to verify the combined weight of all components of the assembly that are to be lifted (please refer to your user's manual or Fraco representative).
4. A competent person must perform all lifting operations.
5. It is the responsibility of the person in charge of lifting operation to ensure that:
   - 5.1 The equipment used for lifting operation (crane, slings, chains or straps, etc.) has the required lifting capacity;
   - 5.2 The working methods used comply with all local rules and regulation currently in effect.

1- The end of mast section must be removed before positioning the chains, slings or straps in order to eliminate the sharp edge created by the bolts or the end mast section.(See figure 3)

Figure 3

2- The lifting straps should be positioned on the rail side (ACT4, ACT8 and MP-8000) or climbing bars (FRSM 20K) where the holes for inserting the bolts are located to balance the load. (See figure 4 & 5)

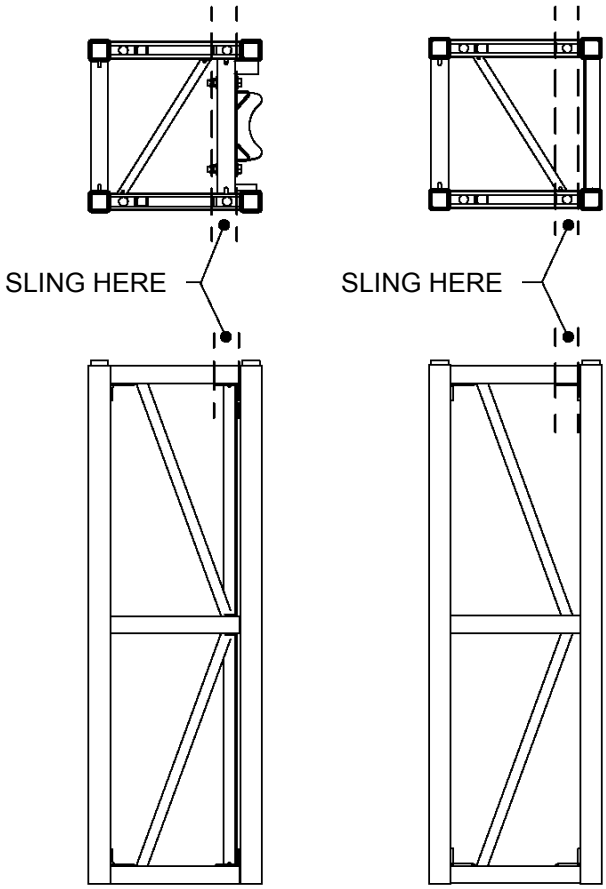


Figure 4
ACT-8, ACT-4
& MP-8000 (Transporter)

Figure 5
20K

3 - A minimum distance of 8 feet (2.44 meters) must separate the end of the mast and the hook of the lifting device. This method will reduce the horizontal component of force applied by the sling on the mast. (See figure 6)

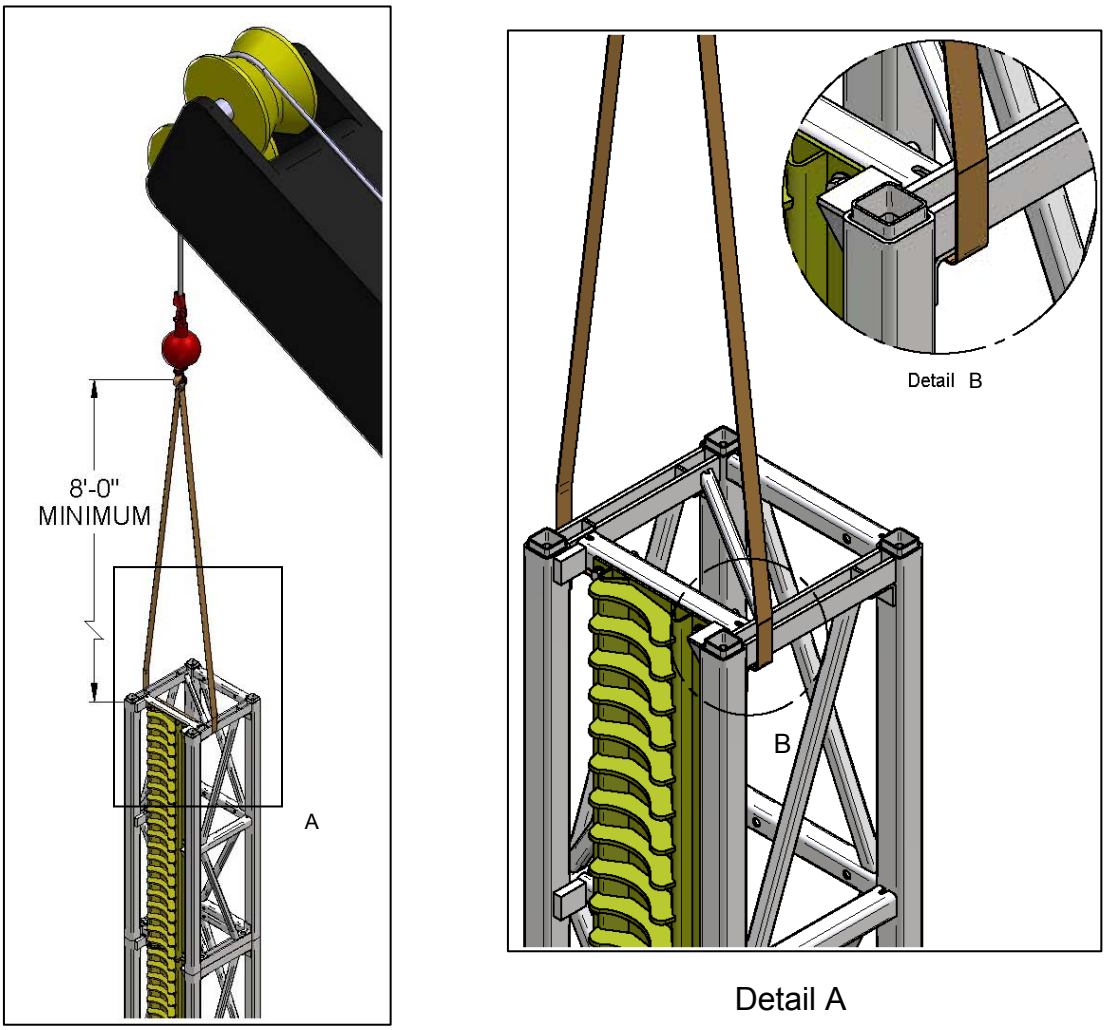


Figure 5

For further informations or any questions please contact:
Jean-Sébastien Lasnier
Telephone : 450-658-0094
Toll Free : 800-267-0094
Fax : 450-658-8905

	Model	Date of issue	Bulletin n°
Technical	**FRSM8000, ACT4, ACT8, 20K**	2010-03-30	U-G-0012-A

FRACO

Utilization specifications concerning the universal freestanding base and the freestanding base specific to each type of platform

To be added to FRACO platforms User's manual for models indicated above

Please read the following technical service bulletin carefully and insert it in the appropriate FRACO user's manual.

Characteristics specific to the FRSM 20K freestanding base (#14030053) and universal freestanding base (# 14030109). Corresponding authorized freestanding heights and opening specifications of the stabilizers.

ITEM #	Description	FRSM 20K freestanding base #14030053 (figure 1)			Universal freestanding base #14030109 (figure 2)			
1	Width	215" (5.46m)			150" (3.81 m)			
2	Number of jacks	6			4			
3	Front stabilizers	Extendable up to 16'' [0.4 m]			Extendable up to 48'' [1.2m]			
4	Rear stabilizers	Extendable up to 36'' [0.9m]			Extendable up to 28'' [0.7m]			
5	Usable with	ACT4	ACT8	20K	FRSM8000	ACT4	ACT8	20K
6	Freestanding heights	25'-0'' [7.62m]	40'-0'' [12.2m]	40'-0'' [12.2m]	35'-0'' [10.6m]	60'-0'' [18.3m]	45'-0'' [13.7m]	45'-0'' [13.7m]
7	Use with Ground base Model	Not Required	Not Required	Not Required	B	A, C, D	A, C, D	A, C, D

Figure 1

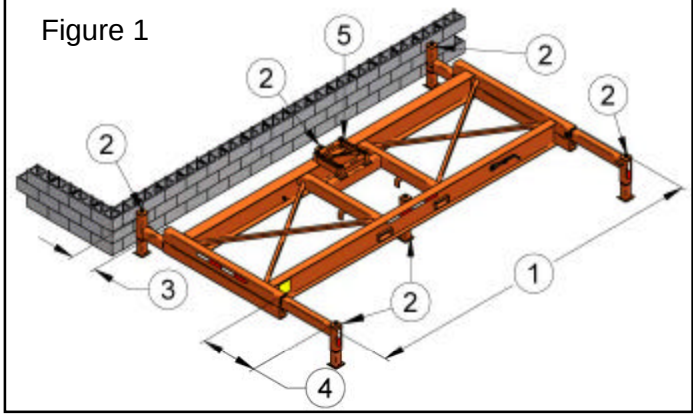
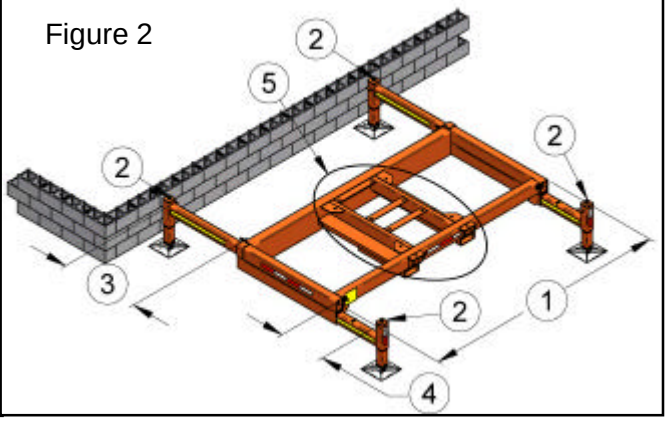


Figure 2



Freestanding heights specifications

1. The freestanding height is determined by the distance measured between the bottom of the jacks (ground) and the top of the platform floor. (see figure 3 and 4)

2. See figure 4 or the appropriate user's manual to identify the base required for the type of elevating unit used.

3. Refer to the appropriate user's manual for the instructions regarding proper installation and dismantling procedure for each specific unit.

Figure 3

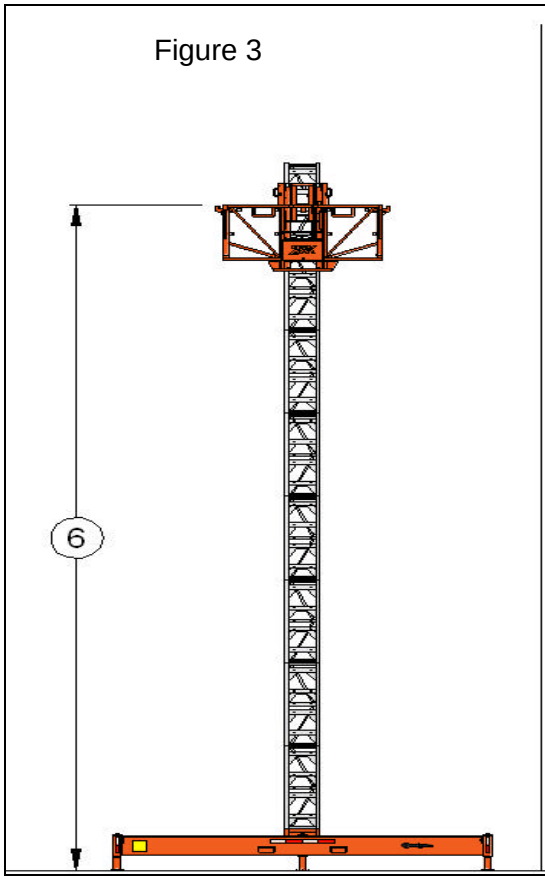
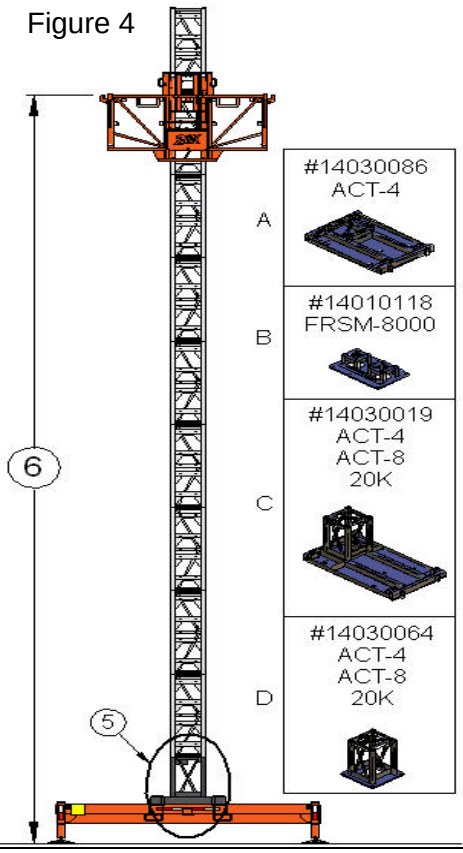


Figure 4



ITEM #	Description	FRSM 20K freestanding base #14030053 (figure 3)			Universal freestanding base #14030109 (figure 4)			
5	Usable with	ACT4	ACT8	20K	FRSM 8000	ACT4	ACT8	20K
6	Freestanding heights	25'-0'' [7.62m]	40'-0'' [12.2m]	40'-0'' [12.2m]	35'-0'' [10.6m]	60'-0'' [18.3m]	45'-0'' [13.7m]	45'-0'' [13.7m]
7	Use with base Model	Not Required	Not Required	Not Required	B	A, C, D	A, C, D	A, C, D

Stabilizer opening specifications

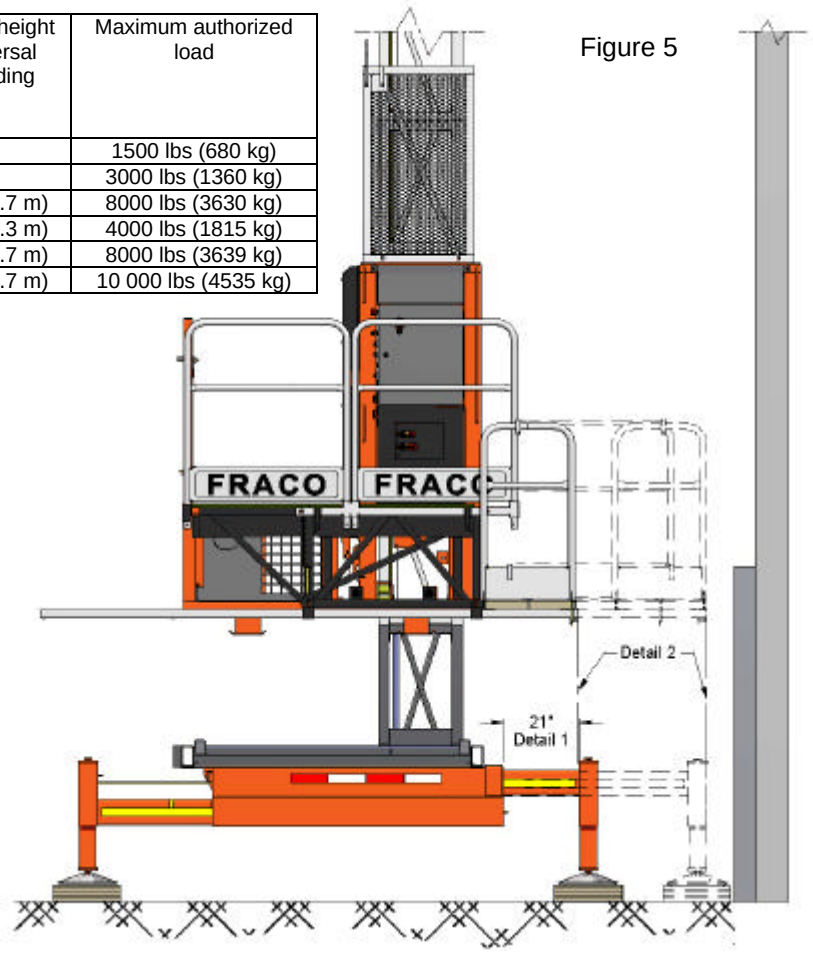
1. **The front and rear stabilizers of every freestanding base (specific to each type of platform)** must be extended to their maximum in order to reach the maximum heights and load capacities specific to each type of equipment in freestanding mode ***(except the universal freestanding base).*** (see chart below)

2. **When using the universal freestanding base**, the front and rear stabilisers must be extended to a minimum of 1'-9'' (533.4 mm). This measure is designated by the distance between the face of the stabiliser insertion tube and the jacks. (see figure 5. detail 1).

3. For any situation and for each type of platform, the planking area must never exceed the front stabilisers of the freestanding base. (see figure 5, detail 2)

Type of platform	Maximum height on platform specific freestanding base	Maximum height on universal freestanding base	Maximum authorized load
FRSM-1500	35'-0'' (10.7 m)	NA	1500 lbs (680 kg)
FRSM-3000	35'-0'' (10.7 m)	NA	3000 lbs (1360 kg)
FRSM-8000	35'-0'' (10.7 m)	35'-0'' (10.7 m)	8000 lbs (3630 kg)
ACT-4	60'-0'' (18.3 m)	60'-0'' (18.3 m)	4000 lbs (1815 kg)
ACT-8	45'-0'' (13.7 m)	45'-0'' (13.7 m)	8000 lbs (3639 kg)
20K	40'-0'' (12.2 m)	45'-0'' (13.7 m)	10 000 lbs (4535 kg)

Figure 5



Failure to comply with the instructions as stated in the user's manual or any documentation produced by the manufacturer can lead to material damages, serious injuries and/or even death.

For further information's or any questions please contact:
Jean-Sébastien Lasnier
Telephone: 450-658-0094
Toll Free: 800-267-0094
Fax: 450-658-8905

	Model	Date of issue	Bulletin n°
Technical	**20K, FRSM-8000, ACT-8**	2010-04-12	U-T-0008-A

FRACO

Specification for utilisation of 10’-6’’ (3.2m) outriggers #19010045

Add to FRACO platforms User’s Guides for models indicated above

Please read the following carefully and insert in your Fraco User’s Manual:

When using 10'-6"(3.2m) outriggers, the maximum length on which you can work on is 6 '(1.8m).

Complete assembly view of 10’6’’ outriggers

Figure 1: Lower part outriggers

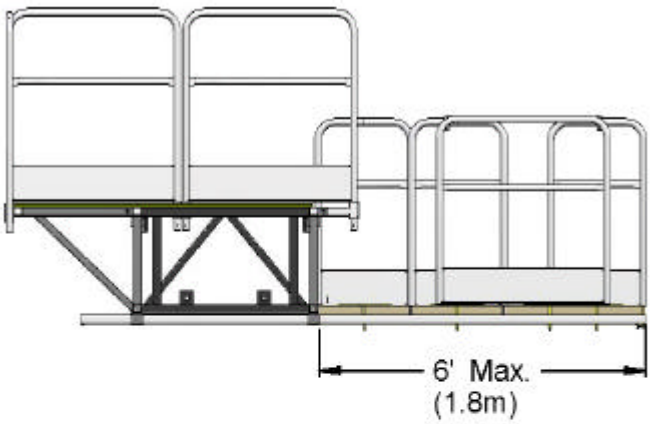
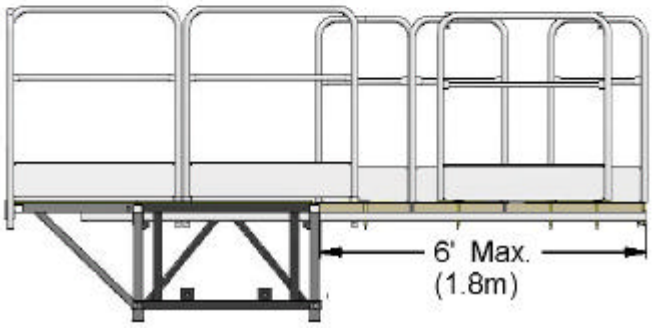


Figure 2: Upper part outriggers



Note:

1. The distance is designated by the measurement from the face of the platform to the very end of the outrigger. (See Figure 1 and 2)
2. This distance applies when outriggers are installed at either the lower or upper part of the platform. (See Figure 1 and 2)
3. When using 10'-6"(3.2m) outrigger to their maximum length of 7 ' (2.1m), you must use accompanying parts found in the # 19510073 kit and install it according to the user’s manual. The outriggers must be installed in the upper part of the platform.

	Model	Date of issue	Bulletin n°
Technical	**20K, FRSM-8000, ACT-8**	2010-04-12	U-T-0008-A

FRACO

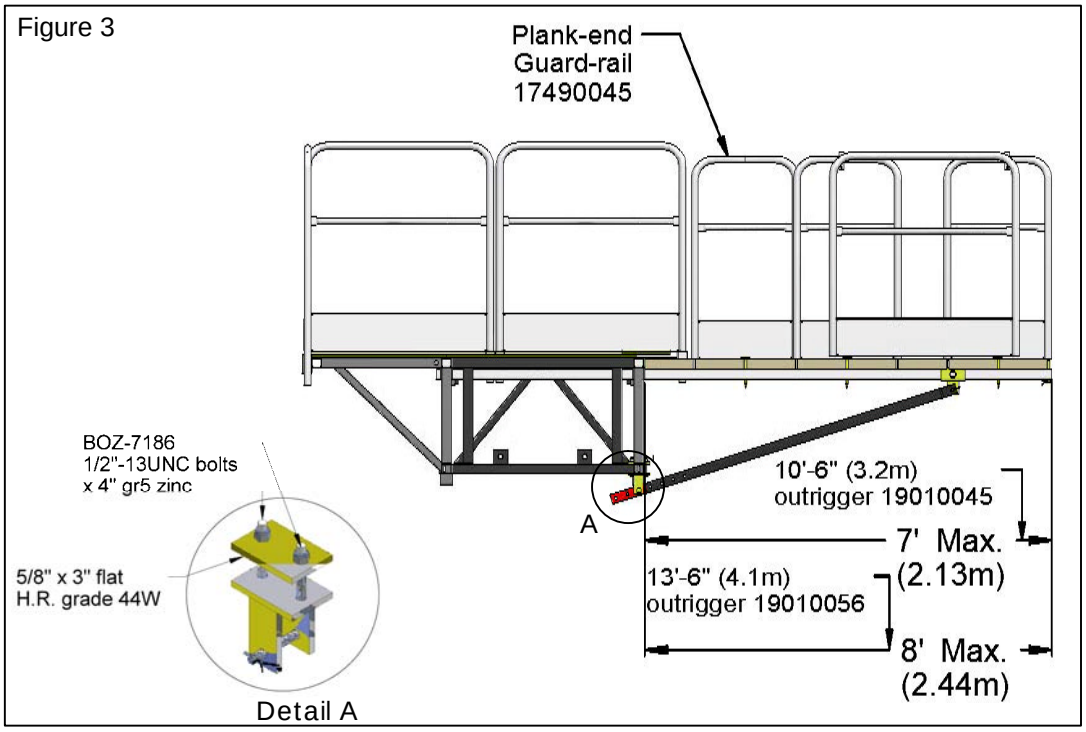
Important change when using the outrigger kit #19510073

1. When using 10'-6'' (3.2m) outriggers to their maximum deployment of 7'-0'' (2.1m), the utilization of the outrigger kit 19510073 (see figure 3) is required and the installation must be done in accordance with the procedure presented in the user's manual.

2. When using 13'-6'' (4.14 m) **the maximum distance which it can be extended is now of 8'-0'' (2.44m)** (see figure 3, detail A).). The utilization of the outrigger kit 19510073 (see figure 3) is required and the installation must be done in accordance with the procedure presented in the user's manual.

Complete assembly view of 10'6'' outriggers and 13'6'' with outrigger kit #19510073

Figure 3



Important:

1. The forged steel (see figure 3 Detail A) 3/8'' x 3'' x 4 ½'' (#28018111) of the outrigger special swivel tie (# 20490555) **must be replaced by a forged steel 5/8'' x 3'' x 4 ½'' H.R. grade 44W (# 28026794).**
2. The 2 bolts BOZ-7186 (1/2''-13 UNC x 3-3/4'' gr5 zinc) **must be replaced by 2 bolts BOZ-7190 (1/2''-13 UNC x 4'' gr 5 zinc).** (see figure 3, detail A).
3. For distance exceeding 8'-0'' (2.44 m) on the face of the platform, utilization of reinforced working platform (#20990280) is required.

Failure to comply with the instructions as stated in the user's manual or any documentation produced by the manufacturer can lead to material damages, serious injuries and/or even death.

For further information or any question please contact:
Jean-Sébastien Lasnier
Telephone: 450-658-0094
Toll Free: 800-267-0094
Fax: 450-658-8905

ACT-8 user's guide corrections

Please read the following carefully and insert in your Fraco User's Guides:

The following corrections must be applied to the ACT8 user's guide:

Page A-6: Modification of paragraph 1.8. "The intermediary cantilever section of 5'0" (1,5m) cannot be replace by twice intermediary cantilever section of 2'6" (762mm)."

Page C-16: Modification of step 3, figure C.38 and figure C.39. "Install the first anchoring device at a maximum of 9.1 m (30'-0") from the ground."

Page C-17: Modification of figure C.40. "Bolts BOA-2008 with Washer, Nut and Plate (20490410) Ø5/8-unc x 3 ½" A325 galv. Assembly"

Page C-20: Clarification of the figure C.49. All 4 holes of the concrete anchors must be bolted.

*** All changes are surrounded by a cloud pattern for identification purpose.

For further informations or any questions please contact:
Anthony Gregoire or Jean-Sebastien Lasnier
Telephone : 450-658-0094
Toll Free : 800-267-0094
Fax : 450-658-8905

Load Distribution and Configurations

Note (see Figure A.3)

1.1- Weight of accessories must be deducted from the permitted load distribution (portable crane, weather enclosure, overheadprotection, monorail, planks if more than (2) two planks wide, etc).

1.2- See load distribution sheet for information.

1.3- Never place loads in the working area or in the traveling area.

1.4- If you remove the guardrails to load the platform, make sure you're attach to a tie-off point as presented at page A-3.

1.5- The weight of the workers is included in the weight capacity. The total weight of the workers must not exceed the allowed loads.

1.6- The space between the workers must be a minimum of 3'-4" (1,0 m).

1.7- Use turnbuckles for distances exceeding 13'-4" (4,0 m) when using cantilever section instead of a taper section.

Important: The intermediar cantilever section of 5'-0" (1,5 m) cannot be replace by twice intermediar cantilever section of 2'-6" (762 mm).

LEGEND

= = Intermediar Cantilever Section of 2'-6" (762 mm)

= Taper Extension Section Adaptor

= = Intermediar Cantilever Section of 5'-0" (1,52 m)

= Turnbuckles of Cantilever Section

= = Cantilever Section of 3'-4" (1,0 m)

= = Cantilever Section of 6'-8" (2,0 m)

= = Cantilever Section of 10'-0" (3,0 m)

= = Taper Cantilever Section of 10'-0" (3,0 m)

20 = = Bridge of 20'-0" (6,1 m) (adaptor required)

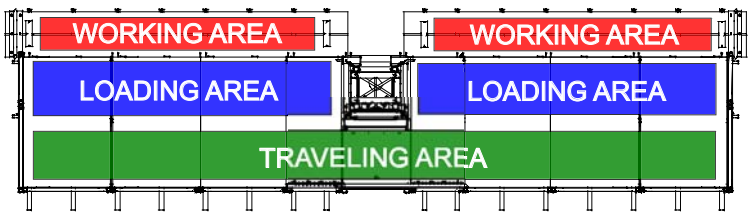
40 = = Bridge of 40'-0" (12,2 m)

60 = = Bridge of 60'-0" (18,3 m)

Installation permitted

A/B Installation permitted with load reduction (50%) on the mentioned side

X Installation prohibited



Installing Anchoring Devices with Freestanding Base (continued)

Step 3 (see Figure C.38)

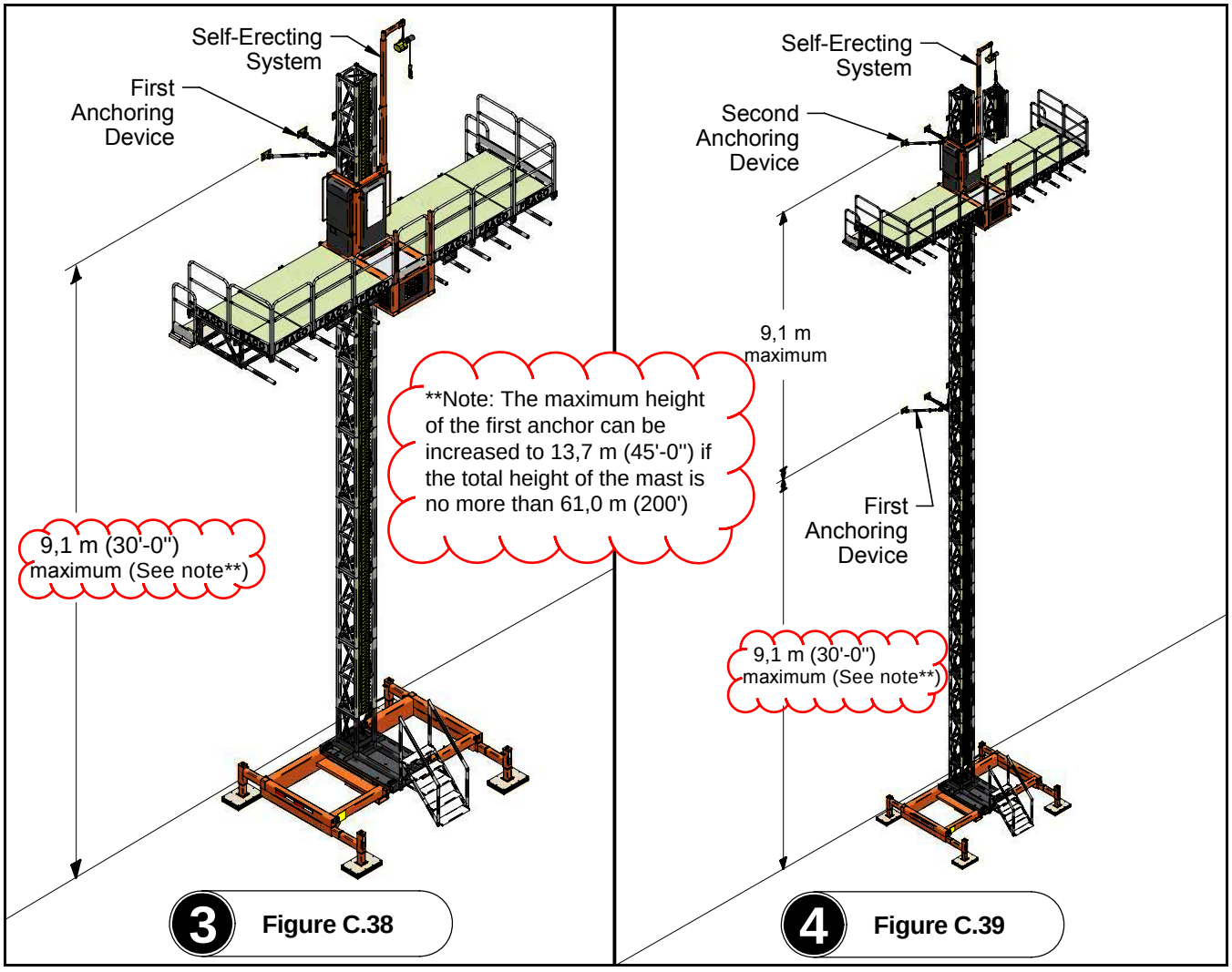
- Install the first anchoring device at a maximum of 9.1 m (30'-0") from the ground. (See note**) (see page C-13 to C-20).

Step 4a (see Figure C.39 and C.34) (self-erecting system)

- Load (6) six mast sections on each side of the platform (see Figure C.34) and raise the platform.
- Continue the installation of the mast sections until reaching the future position of the second anchoring device.
- Replace the planks and plank-ties on the anchor space.
- Install the second anchoring device at 9,1 m above the first anchoring device (see page C-17 to C-25).
- Complete the installation of the mast sections and anchoring devices according to the desired height.
- Do not exceed the distance of 9,1 m between the anchoring devices.
- Once the last mast section is installed, bolt on the mast end section.
- When the mast installation is completed, lower the platform and remove the self-erecting system.
- Finish the installation of the platform (turnbuckle of the cantilever section, guardrail, etc...)
- Install the wire mesh protection on the elevating unit (see Chapter B «Wire Mesh Protection»).

Step 4b (see Figure C.39 and C.35) (crane truck)

- You can join up to 9,1 m of mast sections for next bolting them on the previous mast section using the crane truck (see Figures C.35).
- Continue the installation of the mast sections until reaching the future position of the second anchoring device.
- Replace the planks.
- Install the second anchoring device at 9,1 m above the first anchoring device (see page C-17 to C-25).
- Complete the installation of the mast sections and anchoring devices until reaching the desired height.
- Do not exceed the distance of 9,1 m between the anchoring devices.
- Once the last mast section is installed, bolt on the mast end section.
- Finish the installation of the platform (turnbuckle of the cantilever section, guardrail, etc...)
- Install the wire mesh protection on the elevating unit (see Chapter B «Wire Mesh Protection»).



3 Figure C.38

4 Figure C.39

General Steps for Assembling of Anchoring Devices

Step 1 (see Figure C.40)

- Position the wall tie adaptor at the desired point on the mast.
- Bolt the wall tie adaptor on the mast and screw them with the nut plate.

Step 2 (see Figure C.41)

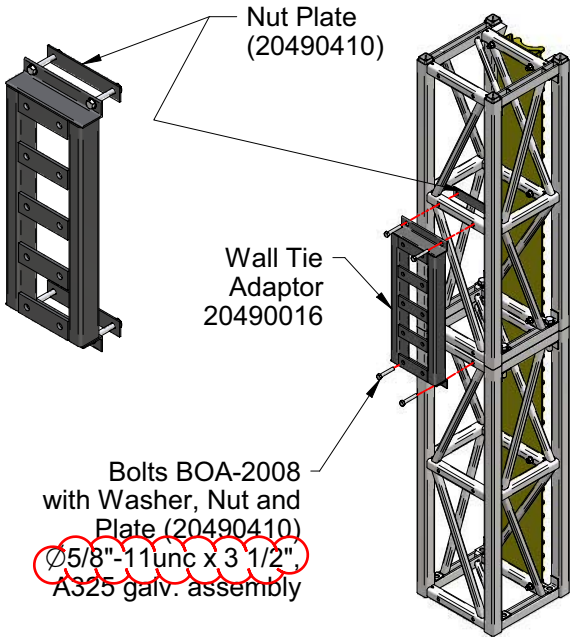
- Slide the central tube into the wall tie tube and fix it with a locking pins supplied with the wall tie.

Step 3 (see Figure C.42)

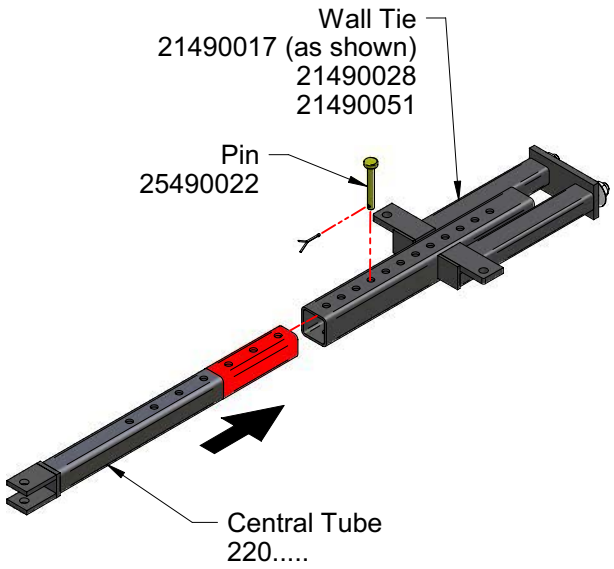
- Bolt the wall tie to the wall tie adaptor.

Step 4 (see Figure C.43)

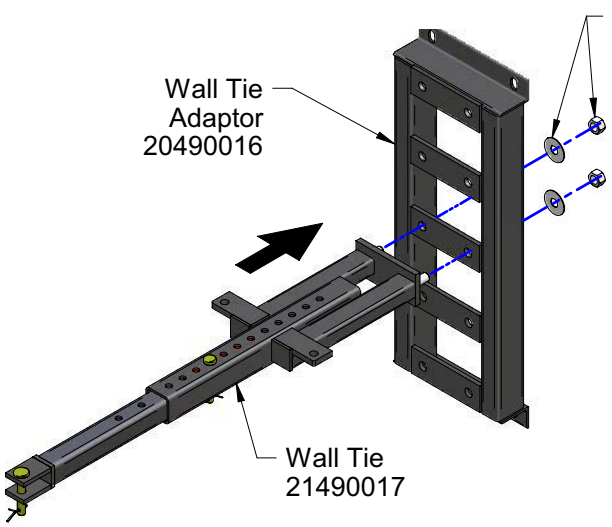
- Fix the turnbuckles on the wall tie with the locking pins supplied with the turnbuckle.



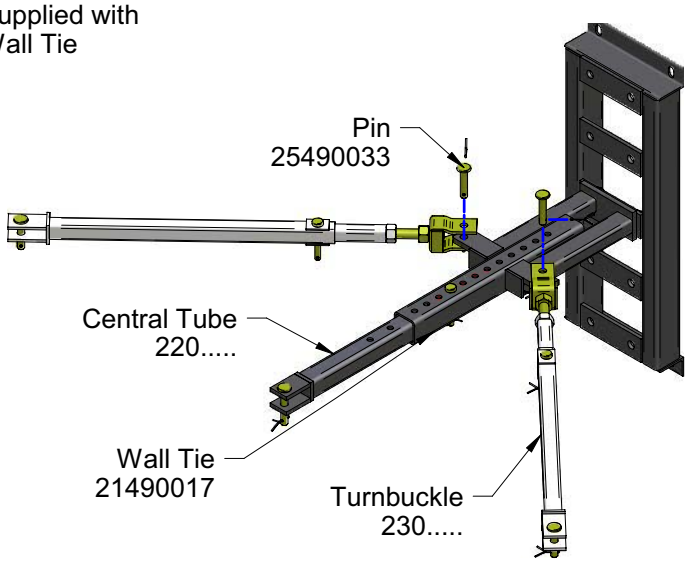
1 **Figure C.40**



2 **Figure C.41**

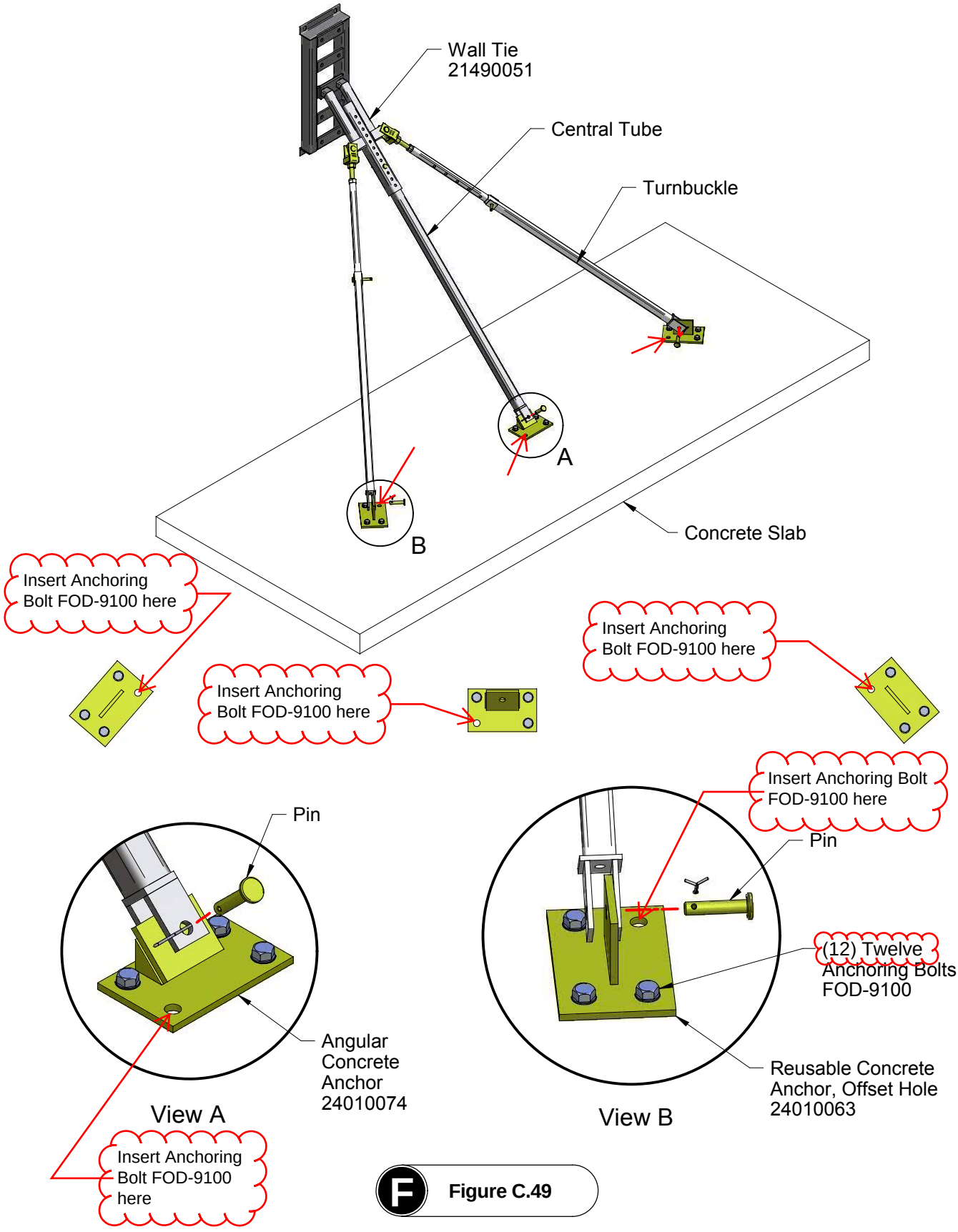


3 **Figure C.42**



4 **Figure C.43**

Installation of bolted Anchors



F **Figure C.49**

**** MUST BE APPROVE BY THE SITE ENGINEER ****

Les Produits Fraco Ltée
91, Chemin des Patriotes, St-Mathias-Sur-Richelieu, Quebec, Canada J3L 6B6
Tel: (450) 658-0094 Fax: (450) 658-8905 CDA: 1-800-267-0094 USA: 1-888-372-2648
www.fraco.com email: fraco@fraco.com

DECLARATION CE OF CONFORMITY

N° 0077/5162/760/01/10/1303

Type:
Device for the lifting of persons or persons and objects, involving a risk of falling from vertical height of more than 3 meters. Mast climbing work platform, single or twin mast.

Brand: FRACO Model: ACT-8
Serial Number:

Technical details:

In single mast:
- Rated load / Number of persons: 4 000 kg / 5 persons
- Working height: 13,7m (Freestanding) – 167m (with anchorages)
- Length / Width of platform: 11,2 m / 3,4 m
- Reduced load: 1 364 kg/ 3 persons at max length (15,23m)

In twin masts:
- Rated load / Number of persons: 8 200 kg / 10 persons
- Working height: 13,7 m (Freestanding) – 167 m (with anchorages)
- Length / Width of platform: 36,0 m / 3,4 m
- Reduced load: 5 440 kg/ 7 persons at max length (40,0 m)

This model complies with all relevant provisions of the machinery directive 2006/42/CE (95/16/CE modified) on the approximation of the laws of the Member States. This model complies with the essential safety and health requirements applicable to it. This declaration concern exclusively the machines in the condition in which they entered the market, and exclude the components that have been added and/or the operations carried out afterward by the final user.

Notified Organism	**Technical file**
APAVE Parisienne	**SARL Fraco**
No d'identification : 0077	420 rue des Érables – F-60710 CHEVRIÈRES
13 à 17, rue Salneuve – 75854 PARIS CEDEX 17	FRANCE

La Vice-présidente
Les Produits FRACO Ltée
Claudette L'Heureux

St-Mathias-Sur-Richelieu
29 décembre 2009

TRANSLATED FROM ORIGINAL NOTICE

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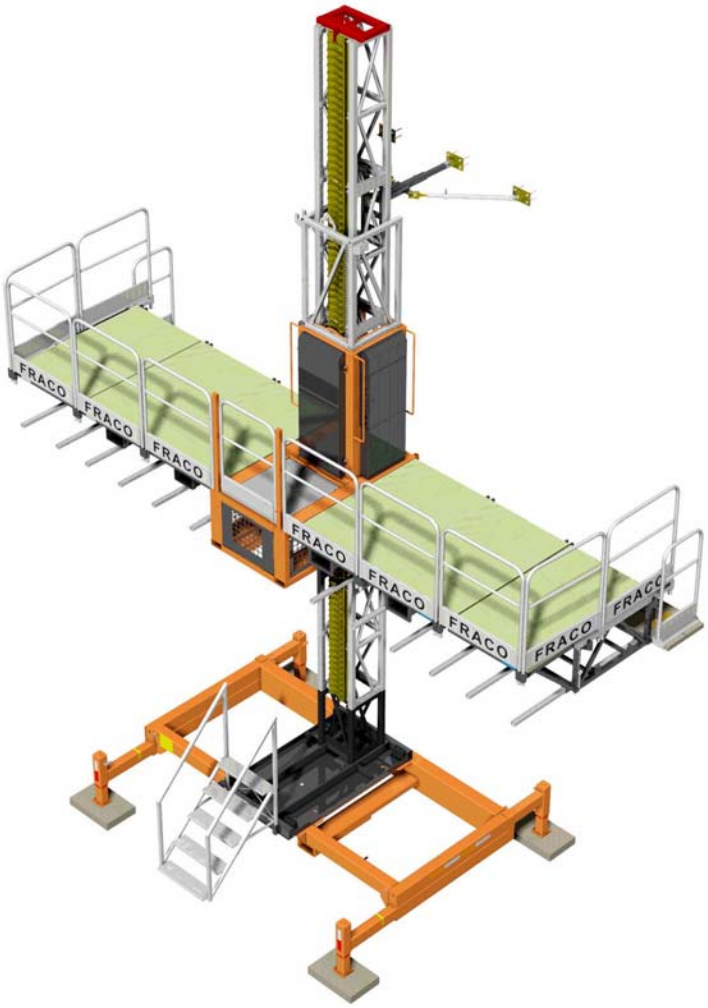

CHAPTER A

General Information and Operation

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Warning

Safety is our primary concern. For this reason, never remove or alter any part in order to adapt the platform to fit a specific area of the building. **Use only genuine FRACO parts.**

Please read the following instructions carefully before installation. Failure to comply with these safety recommendations and local rules and regulations may lead to serious damage and personal injury as well as death. FRACO and/or its representative and/or its importer cannot in any case be held liable.

1- Safety rules (to be read before any use of the product) :

1.1- Mark out, with beacons or barricade tape, and prohibit access around the base and the platform. This should be done according to the local rules.

1.2- The platform should not be used in an environment with the potential for explosion (refineries, etc.).

1.3- The operator should have received Level 1 training (platform use), be familiar with the entire contents of the user's guide, and have mastery of the rules for using the platform.

1.4- The installer should have received Level 2a training (installation without anchor) or Level 2b training (installation with anchor), be familiar with the entire contents of the user's guide, and have mastery of the rules for using the platform.

1.5- **Never assume anything!** If you have any questions concerning the operation of the **FRACO** unit, stop and consult the user's guide. If you are still unsure, call your **FRACO** representative.

1.6- At least two (2) persons per mast should be on the platform at all times to assist in the event of a breakdown or the need for rescue during use, installing or dismantling.

1.7- The maximum freestanding height is 45'-0" (13,7 m). You must open the fronts stabilizers to the maximum.

1.8- If you need to go higher than the freestanding height (without anchoring devices), you must use anchoring device. Refer to the user's guide for instructions.

1.9- Always use anchoring device when you are not using the freestanding base.

1.10- This platform must be maintained periodically as well as inspected where required by local laws and regulations. Refer to the user's guide.

1.11- In the event of an storm, **do not use the platform and get off of it immediately.**

1.12- Assembly and disassembling are prohibited if speed of wind is higher than 28 mph (45 km/h). In out-service situation, you must locate the platform between two levels of anchorages at equal distance of those and balance load on each side of the mast or descend platform on level from the ground.

1.13- Maximum swiftness of the winds allowed at the time of the use of the platform is of :
- Freestanding height : 22 mph (35 km/h).
- With anchorages installation : 34 mph (55 km/h).

1.14- It is the operator's responsibility to ensure that the maximum load and the maximum number of people allowed on the platform at one time are respected. Refer to the user's guide for the type of the platform being used at the loading distribution and configurations parts.

1.15- The platform should not be used as an elevator.

1.16- Plank characteristics :
2" x 10" or 12" (0,05 m x 0,25 m or 0,30 m) should be able to withstand a load of 265 lb (120 kg) at a mid-span of 4'-0" (1,2 m).

1.17- Ensure that efforts transmitted by platform (anchors and bases) are adequately constant.

1.18- **Do not use crane, monorail, interior working, overhead protection or winter enclosure with a installation freestanding base.**

1.19- At all the time, you must have an extinguisher adapted on the platform. This place must be announced on the platform.

2- Before raising or lowering the platform, make sure that :

2.1- The base is properly installed and the mast is level in all directions (see the allowable tolerance in the user's guide).

2.2- Guardrails are installed in all the places.

2.3- A visual inspection has been made before the platform is moved in order to verify that all the parts are in place and that no protrusions will impede the proper vertical movement.

2.4- The platform never exceeds the last anchor more than 5'-0" (1.5 m).

2.5- All persons have been alerted prior to any platform move.

3- In case of breakdown or in case the engine stops without reason :

3.1- Verify that the motor switch is in « ON ».

3.2- Verify if the emergency stop button is engaged. If so, pull it on the « OFF» position.

3.3- Verify the oil and gas level of the engine as well as hydraulic oil level in tank.

3.4- Contact your dealer **FRACO**.

3.5- If the problem persists, check the notice for the emergency routine.

4- In case of fire :

4.1- **Do not panic, keep calm!** Warn the other workers that there is a fire.

4.2- **Do not try the impossible!** If available, use a fire extinguisher and follow the instructions provided (refer to local regulation)

4.3- If the fire seems out of control, go down the platform as fast as you can by the nearest access.

4.4- Call the local fire department.

Tie-Off Point

Always wear your personal anti fall protection equipment during the removal and replacing of the planks when passing the wall ties and/or when you remove and replace the guardrails.

Workers exposed to a fall hazard must be tied off to an anchoring point capable of supporting 5 000 lb. Their harnesses should be equipped with a shock absorber. The anchoring points that are shown here, meet the regulation and requirements. However, we want to remind you that improper tie-off technique can result in injuries. We recommend that every worker receives adequate training on the safe and proper utilization of personal protective equipment (PPE) prior to working in heights.

Important :

- One (1) worker per tie-off point.
- Proceed with an inspection of the tie-off point by a competent person after any fall related use of this tie-off point.
- Never use a damage tie-off point.

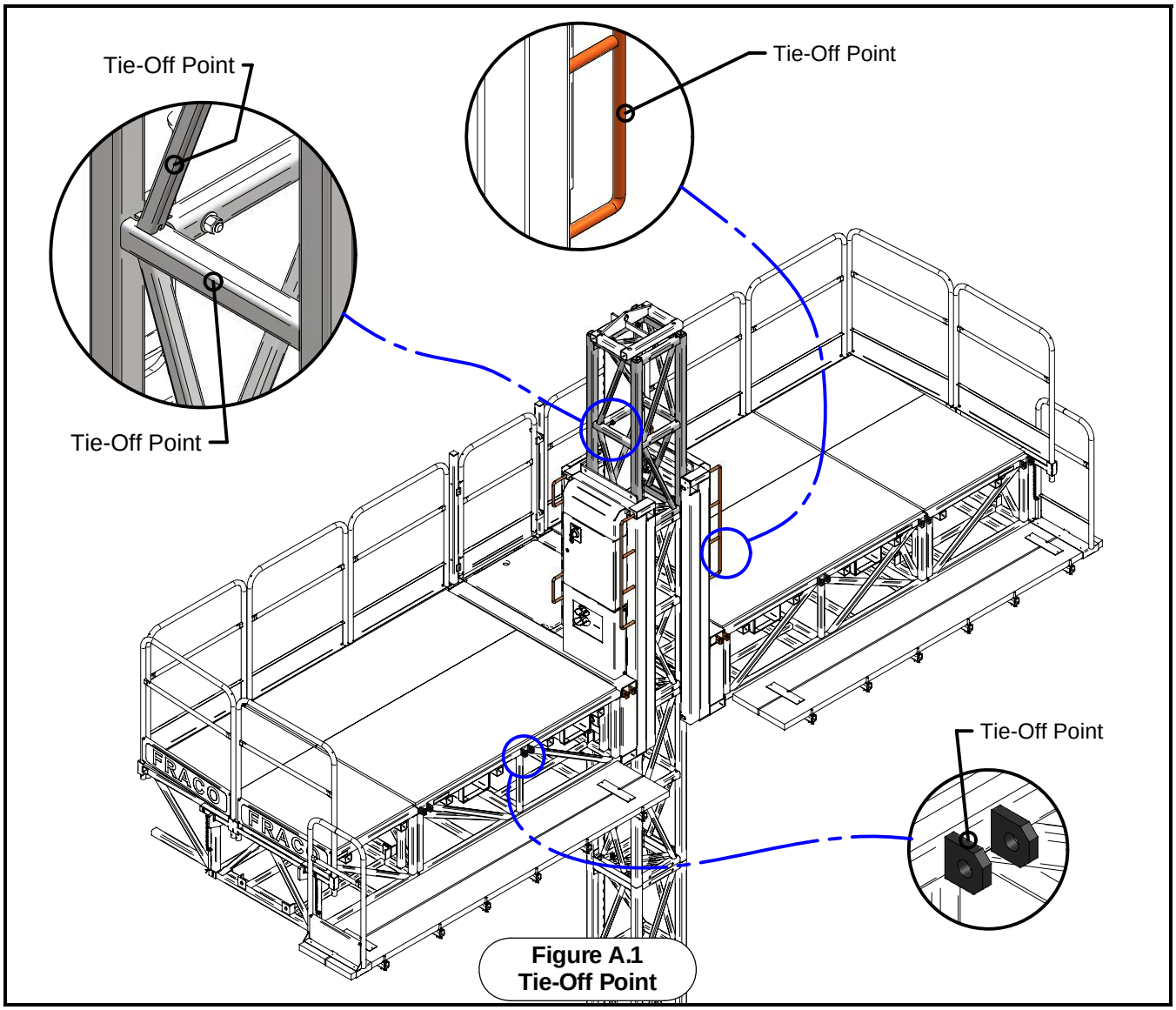


Figure A.1
Tie-Off Point

General View (single mast)

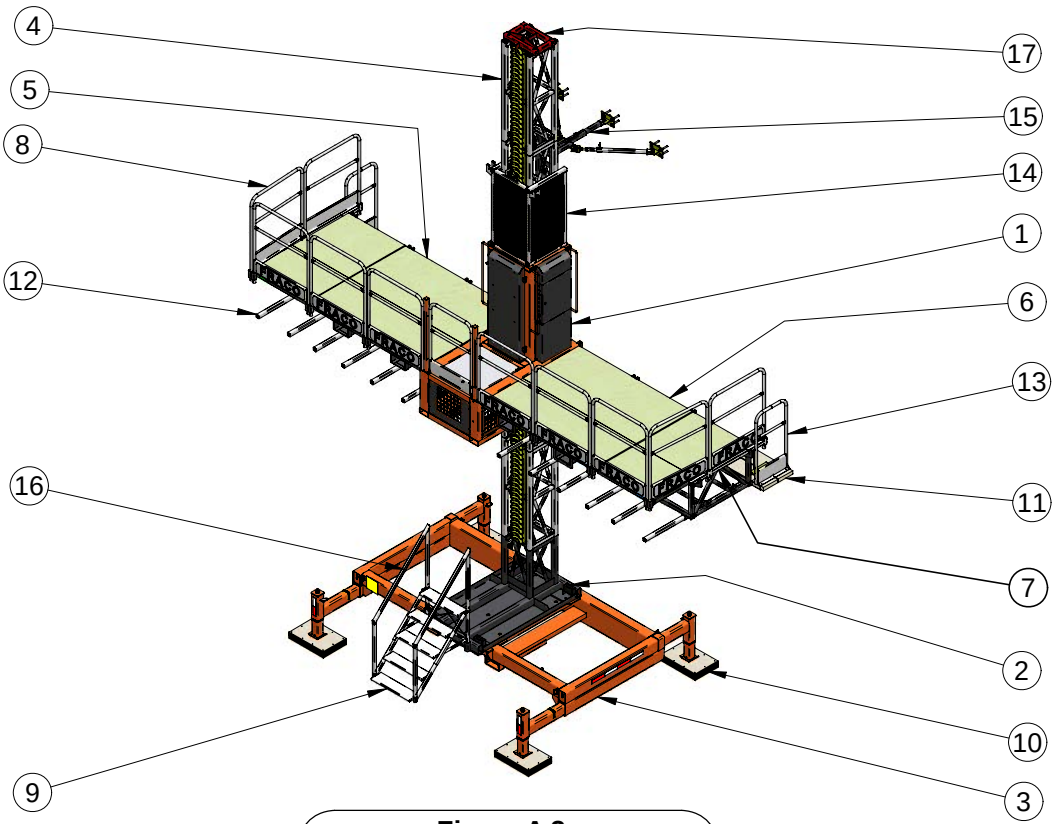


Figure A.2a
General View (single mast)

List of Components		
N°	**Code**	**Description**
1	100300xx	ACT-8 Elevating Unit
2	14030086	Ground Base
3	14030109	Universal Freestanding Base
4	13030018	Mast Section with Rail
5 6	150300xx 150300xx 150600xx 150600xx 150200xx 150200xx	Left Modular Cantilever Section Right Modular Cantilever Section Left Modular Taper Cantilever Section Right Modular Taper Cantilever Section No-Modular Cantilever Section No-Modular Taper Cantilever Section
7	20491139	Guardrail Pockets Support
8	17490023	Guardrail 3'-4" x 4'-2" (1,0 m x 1,3 m)
9	20491310	(5) Five Steps Stair
10	20490083	Wood Pad
11	-	Planks
12	190xxxxx	Outrigger
13	17490045	Plank-End Guardrail
14	20490117	Protection Wire Mesh
15	-	Anchoring Device
16	20490252	Stair Rail
17	13030029	End Mast Section

General View (double mast)

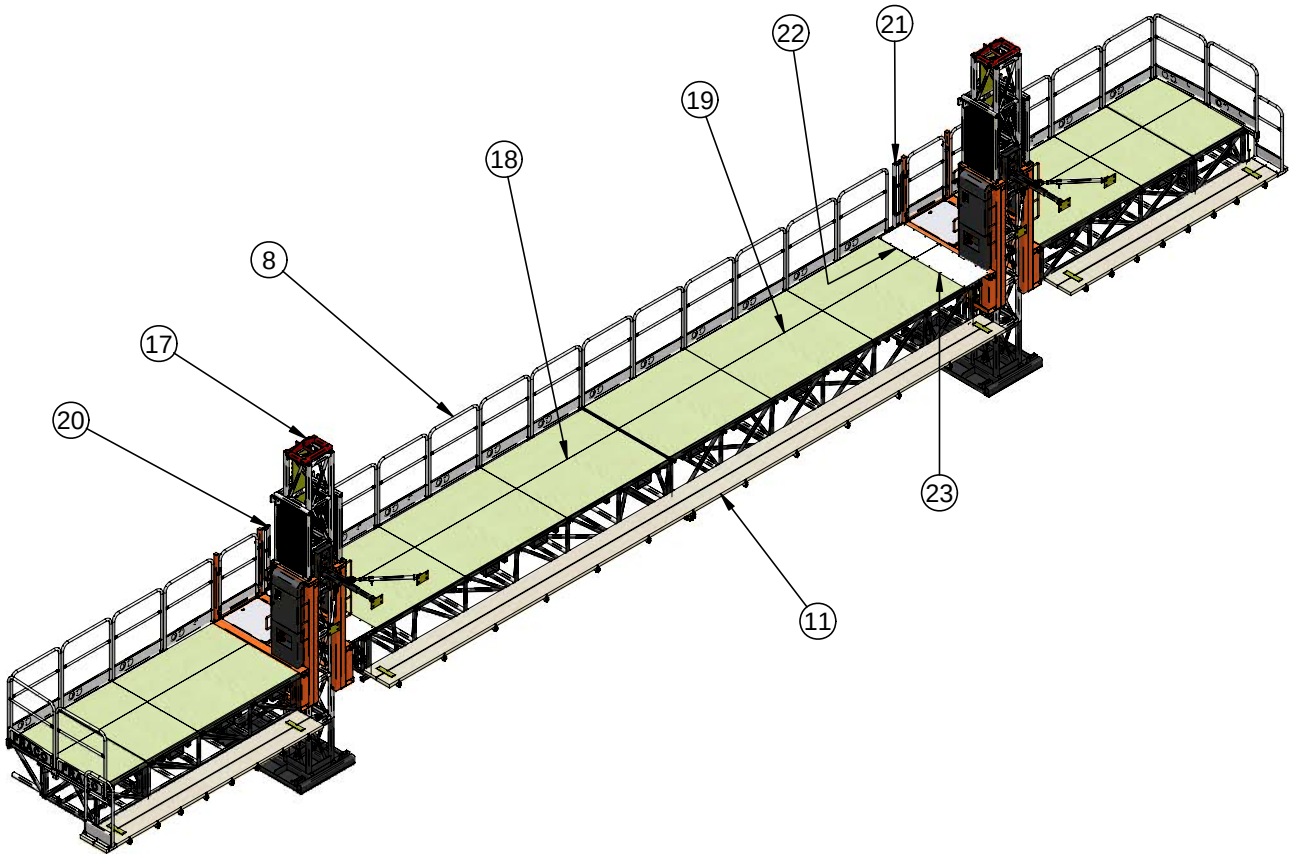


Figure A.2b
General View (double mast)

List of Components		
N°	**Code**	**Description**
18, 19	150301xx 150200xx	Left and Right Modular Bridge Section No-Modular Bridge Section
20	17490427	Right Covering Guardrail
21	17490416	Left Covering Guardrail
22	20490319	Anti Skid Steel Plate 2'-4" (711 mm)
23	20490320	Anti Skid Steel Plate 3'-4" (1,0 m)
24	15030076 15020075	Modular Center Bridge Section No-Modular Center Bridge Section
25, 26	150300xx 150300xx	Right and Left Intermediar Cantilever Section Right and Left intermediar Taper Cantilever Section

Load Distribution and Configurations

Note (see Figure A.3)

1.1- Weight of accessories must be deducted from the permitted load distribution (portable crane, weather enclosure, overheadprotection, monorail, planks if more than (2) two planks wide, etc).
1.2- See load distribution sheet for information.
1.3- Never place loads in the working area or in the traveling area.
1.4- If you remove the guardrails to load the platform, make sure you're attach to a tie-off point as presented at page A-3.
1.5- The weight of the workers is included in the weight capacity. The total weight of the workers must not exceed the allowed loads.
1.6- The space between the workers must be a minimum of 3'-4" (1,0 m).
1.7- Use turnbuckles for distances exceeding 13'-4" (4,0 m) when using cantilever section instead of a taper section.
1.8- The intermediar cantilever section of 5'-0" (1,5 m) should be replace by twice intermediar cantilever section of 2'-6" (762 mm), the opposite is disabled.

LEGEND

= = Intermediar Cantilever Section of 2'-6" (762 mm)

= = Intermediar Cantilever Section of 5'-0" (1,52 m)

= = Cantilever Section of 3'-4" (1,0 m)

= = Cantilever Section of 6'-8" (2,0 m)

= = Cantilever Section of 10'-0" (3,0 m)

= = Taper Cantilever Section of 10'-0" (3,0 m)

= Taper Extension Section Adaptor

= Turnbuckles of Cantilever Section

20 = = Bridge of 20'-0" (6,1 m) (adaptor required)

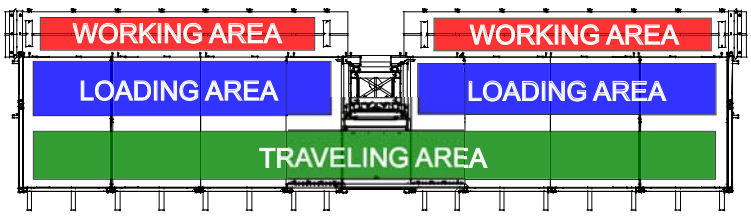
40 = = Bridge of 40'-0" (12,2 m)

60 = = Bridge of 60'-0" (18,3 m)

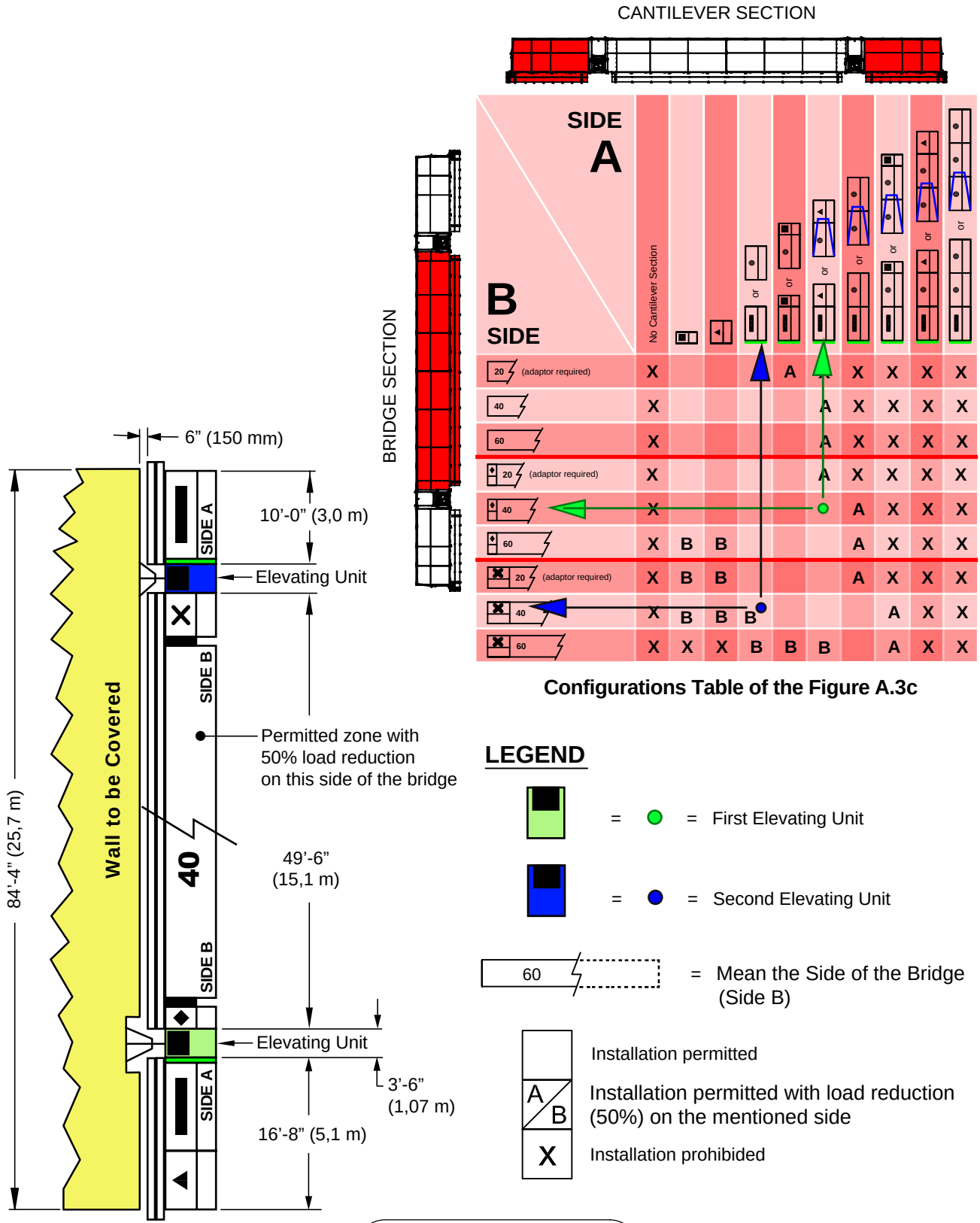
Installation permitted

A / B Installation permitted with load reduction (50%) on the mentioned side

X Installation prohibited



Load Distribution and Configurations (continued)

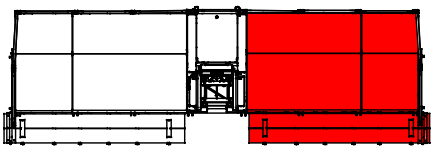


Configurations Table of the Figure A.3c

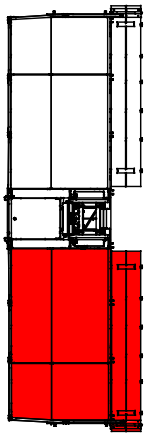
Figure A.3a
Exemple of Use Table

Load Distribution and Configurations (continued)

CANTILEVER SECTION



CANTILEVER SECTION



B \ SIDE A	No Cantilever Section			or	or	or	or	or	or	or
No Cantilever Section				X	X	X	X	X	X	X
				A	A	X	X	X	X	X
					A	A	X	X	X	X
or	X	B				A	A	X	X	X
or	X	B	B				A	X	X	X
or	X	X	B	B				A	X	X
or	X	X	X	B	B			A	A	X
or	X	X	X	X	X	B	B		A	X
or	X	X	X	X	X	X	B	B		A
or	X	X	X	X	X	X	X	X	B	A-B

Load Reduction

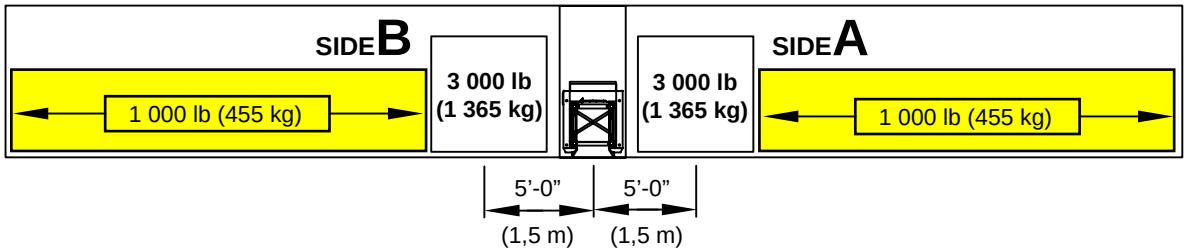
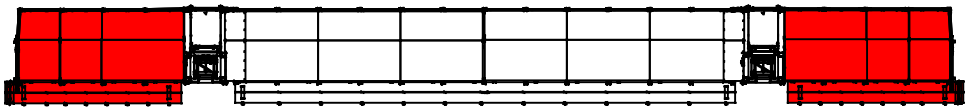


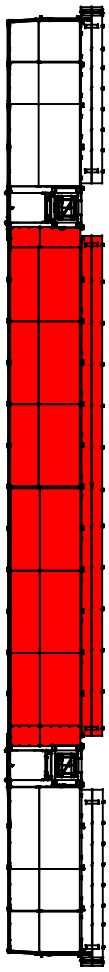
Figure A.3b
Configurations

Load Distribution and Configurations (continued)

CANTILEVER SECTION



BRIDGE SECTION



SIDE B \ SIDE A	No Cantilever Section			or	or	or	or	or	or	or
20 (adaptor required)	X				A	X	X	X	X	X
40	X					A	X	X	X	X
60	X					A	X	X	X	X
20 (adaptor required)	X					A	X	X	X	X
40	X						A	X	X	X
60	X	B	B				A	X	X	X
20 (adaptor required)	X	B	B				A	X	X	X
40	X	B	B	B				A	X	X
60	X	X	X	B	B	B		A	X	X

Full Load

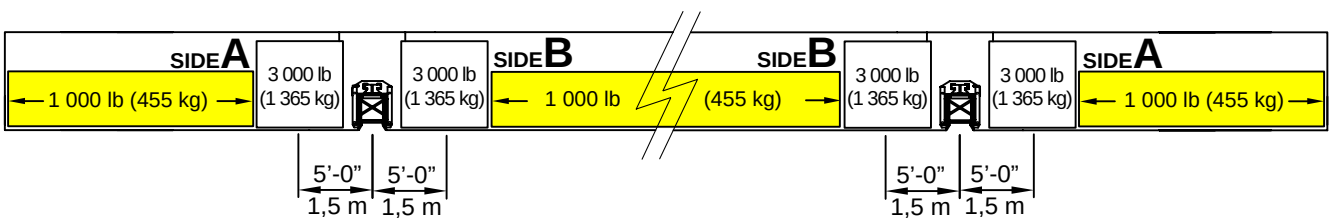


Figure A.3c
Configurations

Operation of the Elevating Unit (Diesel Model 2008)

Step 1 (Before ignition)

1.1- Make sure the trajectory of the platform is free of obstacles.
1.2- Make sure the emergency switch buttons is disengage. (see View F)
1.3- Make sure the accessories selector is in “ACT” position. (see View E)

Step 2 (Ignition) (see Figure A.6a-1 and A.6a-2)

2.1- Turn the starter switch key counterclockwise to “PREHEAT” position. (see View A1 and View B1)
2.2- Wait for the “GLOW LAMP” led to close.
2.3- Turn the starter switch key clockwise to start the engine. (see View A2 and View B2)
2.4- Wait a couple of minutes so the engines reach its normal temperature of operation.

Step 3 (Ascending) (see Figure A.6a-1 and A.6a-2)

3.1- To elevate the platform hold the “UP” selector in the “FAST” or “SLOW” position. (see View G)
3.2- When the platform reach the desire working heights, release the ‘’UP’’ selector and wait until the elevating unit rest on the safety.
3.3- Turn the starter switch key to the “OFF” position to stop the engine.

Step 4 (Lowering) (see Figure A.6a-1 and A.6a-2)

4.1- Proceed with steps 1 and 2 in complete.
4.2- To lower the platform, hold the “DOWN” selector to “SLOW” or “FAST” position.
4.3- When the platform reach the desire working height, release the “DOWN” selector and wait until the elevating unit rest on the safety.
4.4- Turn the starter switch key to the “OFF” position to stop the engine.

Note:

- The 2nd speed doesn’t work if there is too much load on the platform.
- If you turn off the engine before the elevating unit is resting on the safety, the platform will go down to rest on the safety units own. You’ll ear a light “Cracking Noise” due to the eternal screw spinning down slowly.

Important :

- A visual inspection of all the points presented of the daily inspection sheet shall be proceed at the beginning of each shift.
- At all time you can push the emergency switch buttons, the platform will stop immediately. (see View F)
- If the engine doesn’t start or for any mechanical problem, refer to the troubleshooting chart at page A-32. If you cannot solve the problem with the troubleshooting chart, contact your **FRACO** representative.
- The emergency engine shall be start and tested every day during the daily inspection.

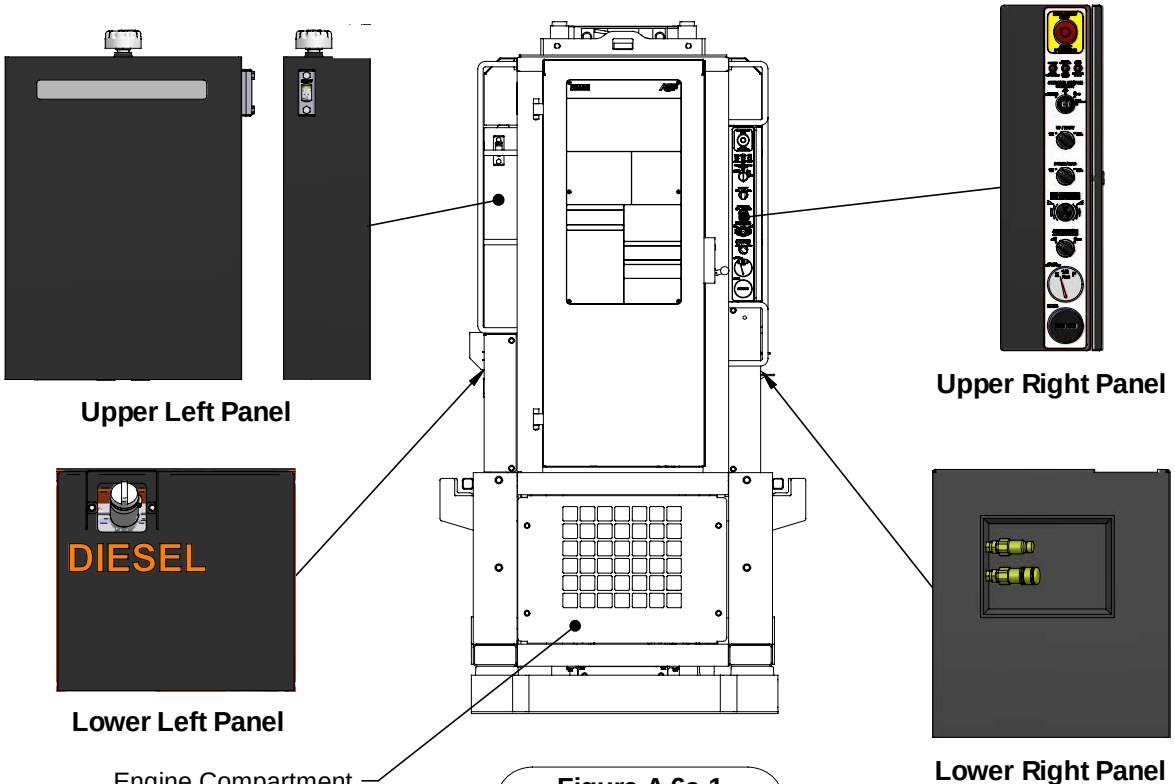
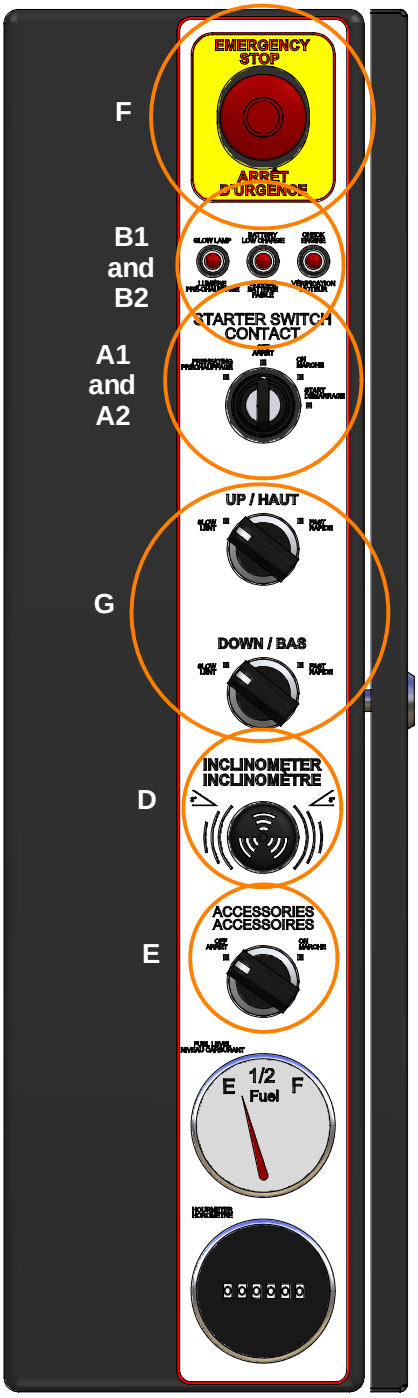
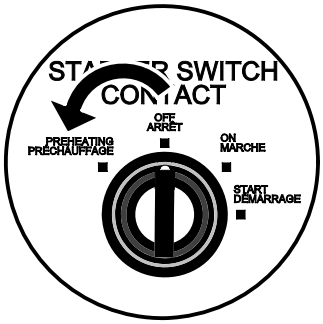


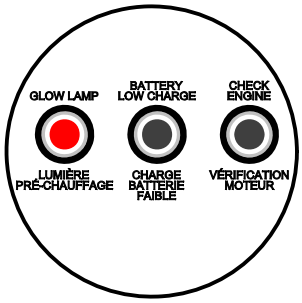
Figure A.6a-1
Control Panels

Operation of the Elevating Unit (Diesel Model 2008) (continued)

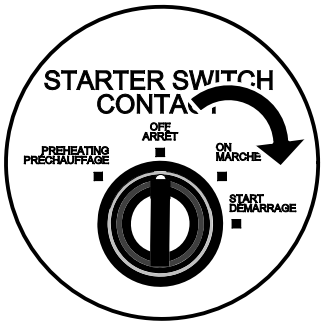




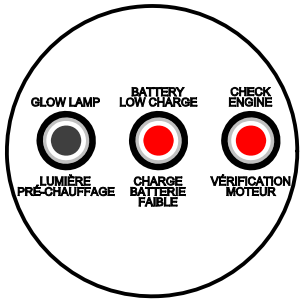
View A1
Starter Switch Key
(Preheating)



View B1
Glow Lamp LED
(Preheating)

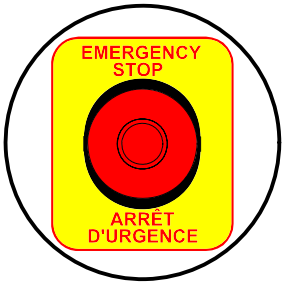


View A2
Starter Switch Key
(Start)



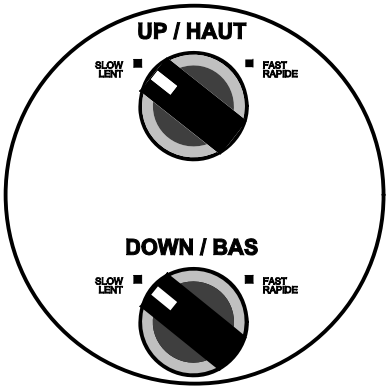
View B2
Battery Low Charge and
Check Engine LED

View D
Sounding Warning Signal
(Inclinometer)



View F
Emergency Stop Button

View E
Accessories Selector
(Portable Crane)



View G
Up & Down Selector
(2 speeds)

Figure A.6a-2
Upper Right Panel

Operation of the Elevating Unit (Electric Model 2008) (continued)

Step 1 (Before activation)

1.1- Make sure the trajectory of the platform is free of obstacles.
1.2- Make sure the emergency switch buttons is disengage.
1.3- Make sure the accessories selector is in “ACT” position. (see View E)

Step 2 (Activation) (see Figure A.6b-1 and A.6b-2)

2.1- Turn the starter switch key to the “ON” position. (see View A and View B1)
2.2- Once the motor is started, release the starter switch key.

Step 3 (Asscending) (see Figure A.6b-1 and A.6b-2)

3.1- To elevate the platform hold the “UP” selector in the “FAST” or “SLOW” position. (see View G)
3.2- When the platform reach the desire working heights, release the “UP” selector and wait until the elevating unit rest on the safety.
3.3- Turn the starter switch key to the “OFF” position to stop the motor.

Step 4 (Lowering) (see Figure A.6b-1 and A.6b-2)

4.1- Proceed with steps 1 and 2 in complete.
4.2- To lower the platform, hold the “DOWN” selector to “SLOW” or “FAST” position. (see View G)
4.3- When the platform reach the desire working height, release the “DOWN” selector and wait until the elevating unit rest on the safety.
4.4- Turn the starter switch key to the “OFF” position to stop the motor.

Note:

- The 2nd speed doesn’t work if there is too much load on the platform.
- If you turn off the engine before the elevating unit is resting on the safety, the platform will go down to rest on the safety units own. You’ll ear a light “Cracking Noise” due to the eternal screw spinning down slowly.

Important :

- A visual inspection of all the points presented of the daily inspection sheet shall be proceed at the beginning of each shift.
- At all time you can push the emergency switch buttons, the platform will stop immediately. (see View F)
- If the engine doesn’t start or for any mechanical problem, refer to the troubleshooting chart at page A-32. If you cannot solve the problem with the troubleshooting chart, contact your **FRACO** representative.
- The emergency engine shall be start and tested every day during the daily inspection.

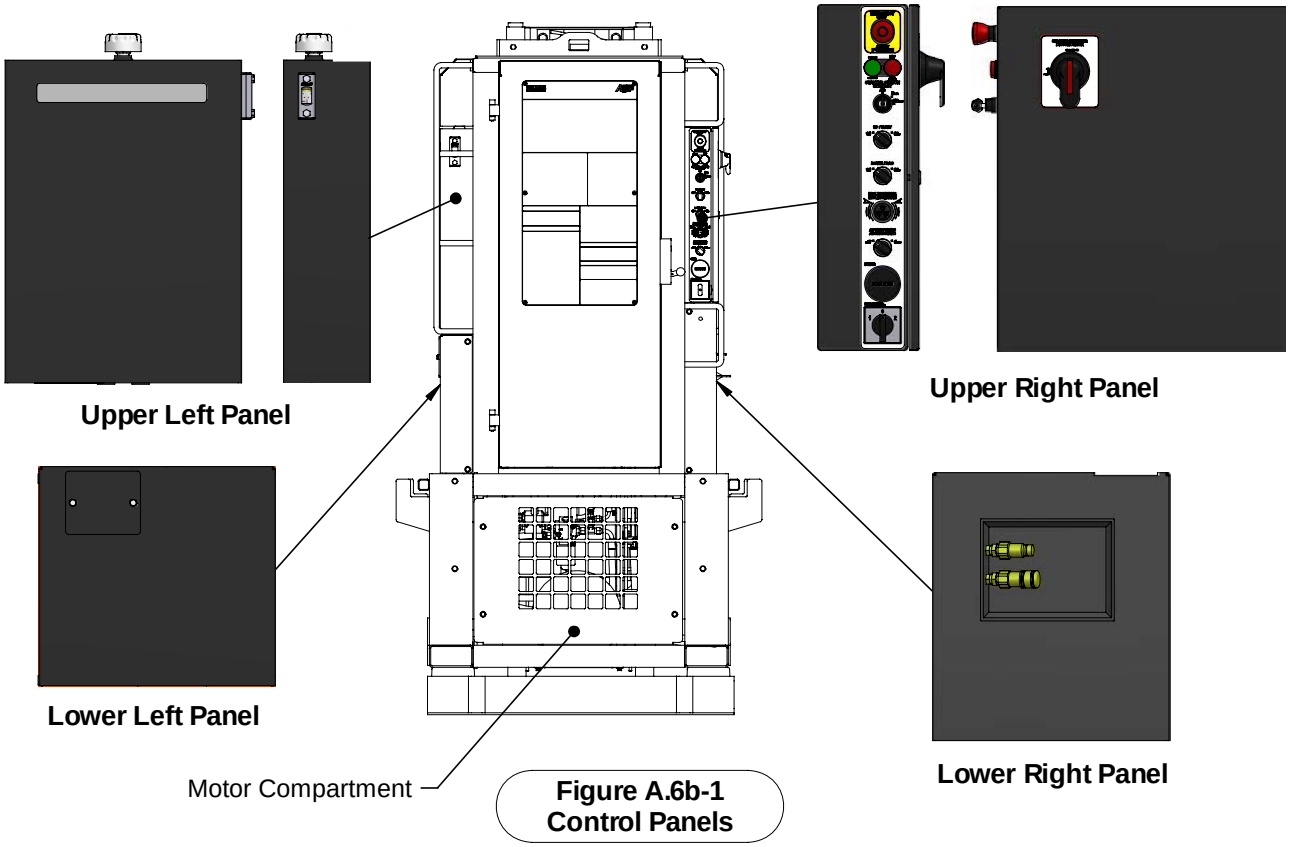
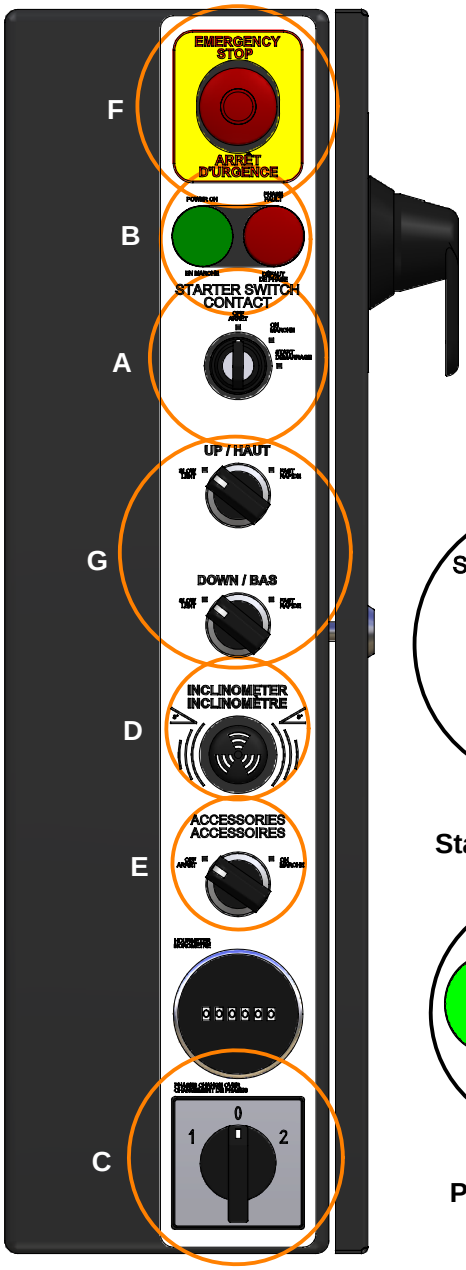


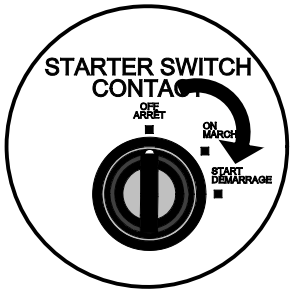
Figure A.6b-1
Control Panels

Operation of the Elevating Unit (Electric Model 2008) (continued)

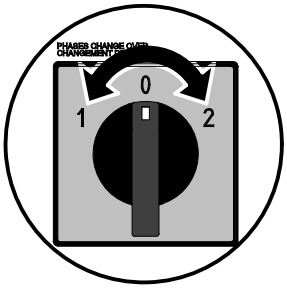


Face View of the Control Box

Right Side View of the Control Box
Circuit-Breaker Selector

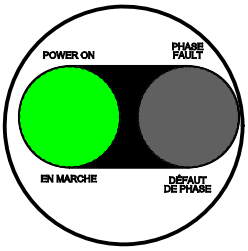


View A
Starter Switch Key

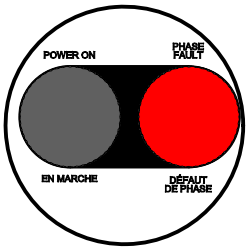


View C
Phases Change Over

View F
Emergency
Stop Button



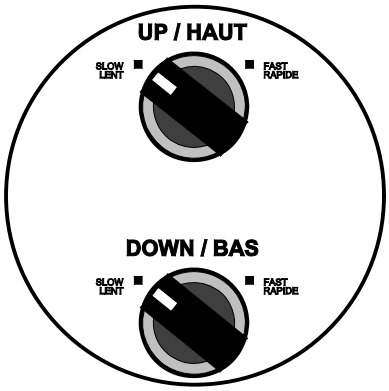
View B1
Power ON LED



View B2
Phase Fault LED

View D
Sounding Warning Signal
(Inclinometer)

View E
Accessories Selector
(Portable Crane)



View G
Up & Down Selector
(2 speeds)

Figure A.6b-2
Upper Right Panel

Operation of the Elevating Unit (Gasoline Model 2008) (continued)

Step 1 (Before ignition)

1.1- Make sure the trajectory of the platform is free of obstacles.
1.2- Make sure the emergency switch buttons is disengage.
1.3- Make sure the accessories selector is in “ACT” position. (see View E)

Step 2 (Ignition) (see Figure A.6c-1 and A.6c-2)

2.1- Pull the choke of the engine located on the lower right panel. (see View A)
2.2- Turn the starter switch key to the “Start” position. (see View B)
2.3- When the engine is started, let the starter switch key go back to it initials position, the (3) three LED tells you that the normal condition of the engine is reach.
2.4- When the engine is running, wait a couple of minutes until the engine reach its normal temperature of operation and push back the choke to it initial position.

Step 3 (Ascending) (see Figure A.6c-1 and A.6c-2)

3.1- To elevate the platform hold the “UP” selector in the “FAST” or “SLOW” position. (see View G)
3.2- When the platform reach the desire working heights, release the “UP” selector and wait until the elevating unit rest on the safety.
3.3- Turn the starter switch key to the “OFF” position to stop the engine.

Step 4 (Lowering) (see Figure A.6c-1 and A.6c-2)

4.1- Proceed with steps 1 and 2 in complete.
4.2- To lower the platform, hold the “DOWN” selector to “SLOW” or “FAST” position. (see View G)
4.3- When the platform reach the desire working height, release the “DOWN” selector and wait until the elevating unit rest on the safety.
4.4- Turn the starter switch key to the “OFF” position to stop the engine.

Note:

- The 2nd speed doesn’t work if there is too much load on the platform.
- If you turn off the engine before the elevating unit is resting on the safety, the platform will go down to rest on the safety units own. You’ll ear a light “Cracking Noise” due to the eternal screw spinning down slowly.

Important :

- A visual inspection of all the points presented of the daily inspection sheet shall be proceed at the beginning of each shift.
- At all time you can push the emergency switch buttons, the platform will stop immediately. (see View F)
- If the engine doesn’t start or for any mechanical problem, refer to the troubleshooting chart at page A-32. If you cannot solve the problem with the troubleshooting chart, contact your **FRACO** representative.
- The emergency engine shall be start and tested every day during the daily inspection.

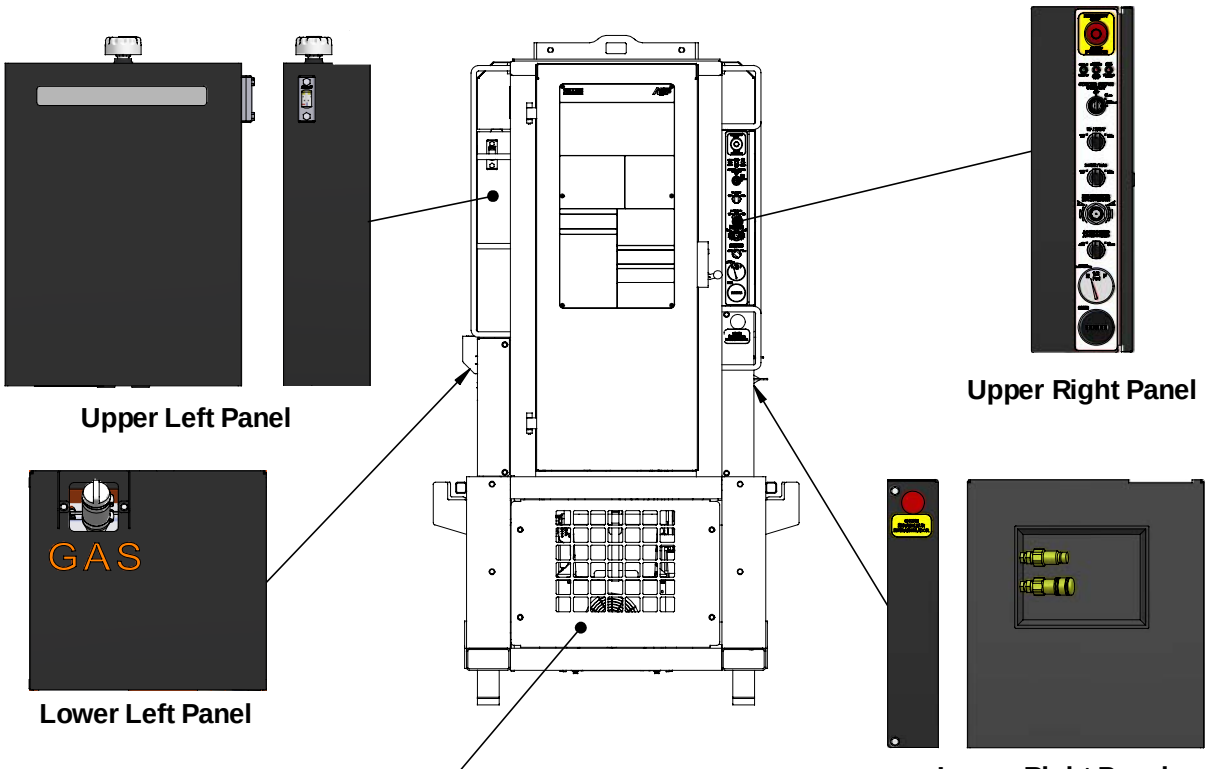
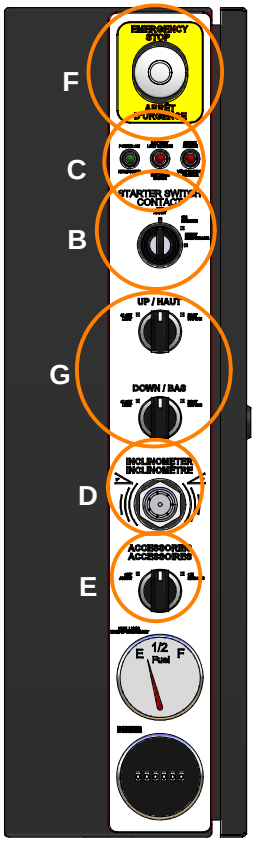
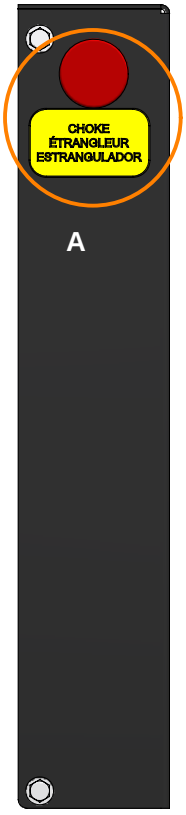


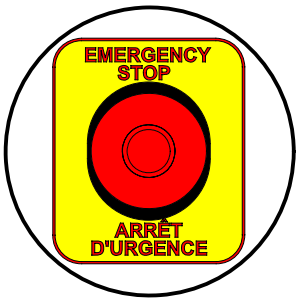
Figure A.6c-1
Control Panels

Operation of the Elevating Unit (Gasoline Model 2008) (continued)

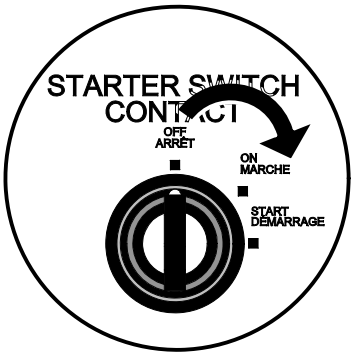




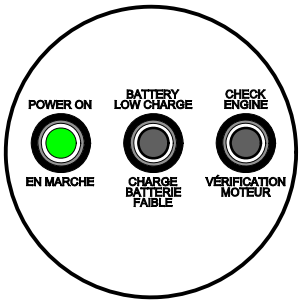
View A
Choke



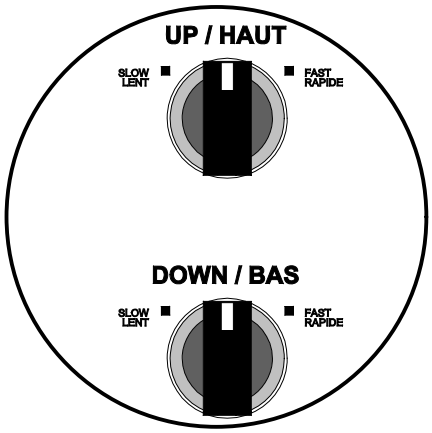
View F
Emergency Stop Button



View B
Starter Switch Key



View C
Power ON LED



View G
Up and Down Selector
(2 speeds)

View D
Sounding Warning Signal
(Inclinometer)

View E
Accessories Selector
(Portable Crane)

Figure A.6c-2
Right Panel

Operation of the Elevating Unit (Diesel Model 2006 Without Arm)

Step 1 (Before ignition)

1.1- Make sure the trajectory of the platform is free of obstacles.
1.2- Make sure the emergency switch buttons is disengage.
1.3- Make sure the accessories selector is in “ACT” position. (see Figure A.6d-1 and View Right Side)

Step 2 (Ignition) (see Figure A.6d-1 and A.6d-2)

2.1- Turn the starter switch key counterclockwise to “PREHEATING” position. (see View A)
2.2- Wait for the “GLOW LAMP LED” to close. (see View C)
2.3- Turn the starter switch key clockwise to start the engine. (see View A)
2.4- Wait a couple of minutes so the engines reach its normal temperature of operation.

Step 3 (Ascending) (see Figure A.6d-1 and A.6d-2)

3.1- Turn and hold the “UP” selector for elevate the platform. (see View D)
3.2- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View D)
3.3- Once you reach the desire working heights, release the “UP” buttons and wait until the elevating unit rest on the safety.
3.4- Turn the starter switch key to the “OFF” position to stop the engine.

Step 4 (Lowering) (see Figure A.6d-1 and A.6d-2)

4.1- Proceed with steps 1 and 2 in complete.
4.2- Turn and hold the ”DOWN” selector for lower the platform. (see View D)
4.3- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View D)
4.4- Once the desire working height is reach, release the “DOWN” buttons and wait until the elevating unit rest on the safety.
4.5- Turn the starter switch key to the “OFF” position to stop the engine.

Note:

- The 2nd speed doesn’t work if there is too much load on the platform.
- If you turn off the engine before the elevating unit is resting on the safety, the platform will go down to rest on the safety units own. You’ll ear a light “Cracking Noise” due to the eternal screw spinning down slowly.

Important :

- A visual inspection of all the points presented of the daily inspection sheet shall be proceed at the beginning of each shift.
- At all time you can push the emergency switch buttons, the platform will stop immediately. (see View F)
- If the engine doesn’t start or for any mechanical problem, refer to the troubleshooting chart at page A-32. If you cannot solve the problem with the troubleshooting chart, contact your **FRACO** representative.
- The emergency engine shall be start and tested every day during the daily inspection.

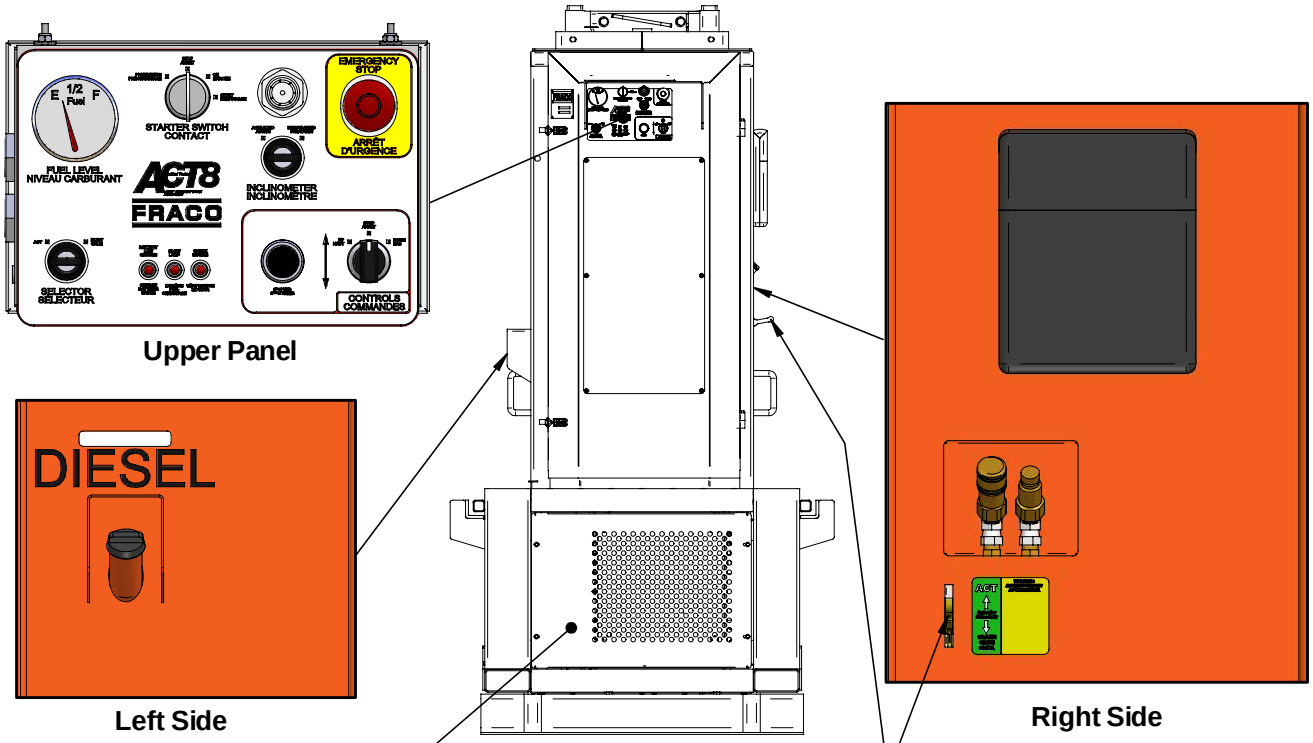
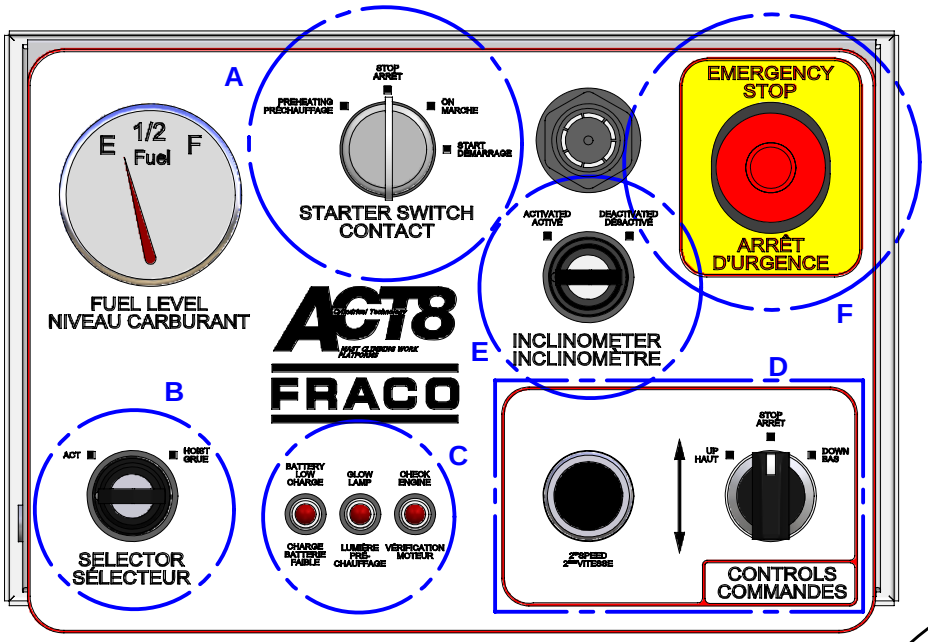
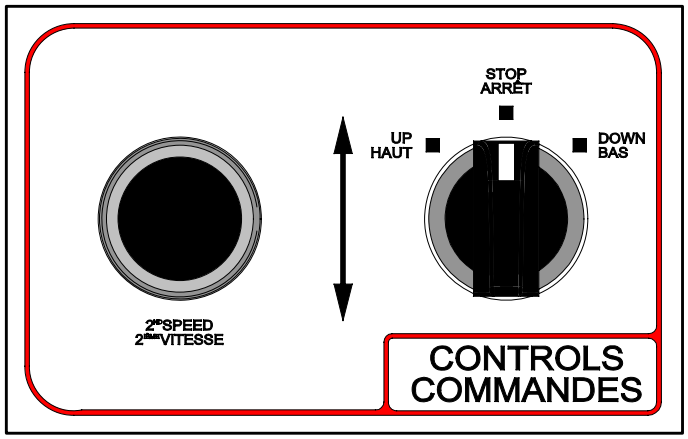


Figure A.6d-1
Control Panels

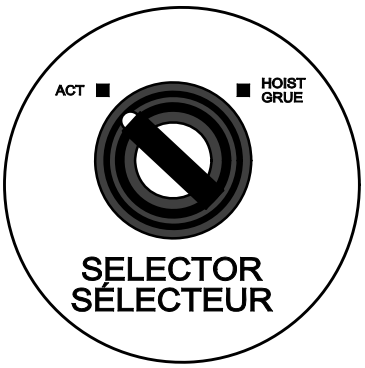
Operation of the Elevating Unit (Diesel Model 2006 Without Arm) (continued)



Control Box (Without Arm)

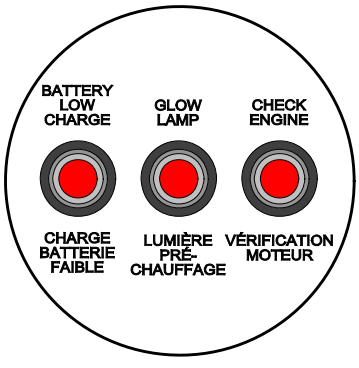


View D
2nd Speed + Selector UP and DOWN

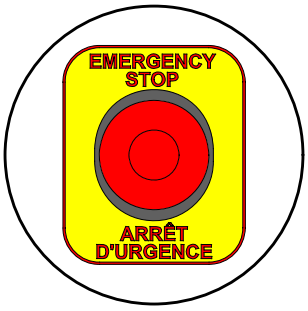


View B
Selector Key

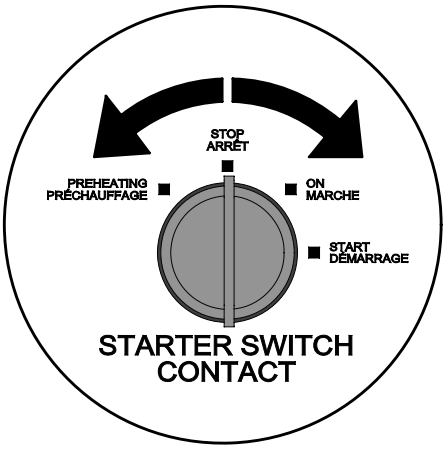
View E
Inclinometer + Buzzer



View C
LED



View F
Emergency Stop Button



View A
Starter Switch Key

Figure A.6d-2
Center Panel

Operation of the Elevating Unit (Electric Model 2006 Without Arm) (continued)

Step 1 (Before activation)

1.1- Make sure the trajectory of the platform is free of obstacles.
1.2- Make sure the emergency switch buttons is disengage.
1.3- Make sure the accessories selector is in « ACT » position. (see Figure A.6e-1 and View Right Side)

Step 2 (Activation) (see Figure A.6e-1 and A.6e-2)

2.1- On the motor box, turn the interruptor lever to the « I » position. (see Motor Box and View G)
2.2- If Red LED is on, turn the phases selector to the « 1 » or « 2 ». This phases selector is located on the side of the motor box. (see Motor Box, View H and View F)
2.3- Turn the starter switch key to the « ON » position. The Power ON LED lights on (see View A and View B)
2.4- Once the motor is started, release the starter switch key.

Step 3 (Ascending) (see Figure A.6e-1 and A.6e-2)

3.1- Turn and hold the « UP » selector for elevate the platform. (see View D)
3.2- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View D)
3.3- Once you reach the desire working heights, release the « UP » selector and wait until the elevating unit rest on the safety.
3.4- Turn the starter switch key to the « OFF » position to stop the motor.

Step 4 (Lowering) (see Figure A.6e-1 and A.6e-2)

4.1- Proceed with steps 1 and 2 in complete.
4.2- Turn and hold the « DOWN » selector for lower the platform (see View D)
4.3- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View D)
4.4- Once the desire working height is reach, release the « DOWN » selector and wait until the elevating unit rest on the safety.
4.5- Turn the starter switch key to the « OFF » position to stop the motor.

Note:

- The 2nd speed doesn't work if there is too much load on the platform.
- If you turn off the engine before the elevating unit is resting on the safety, the platform will go down to rest on the safety units own. You'll ear a light « Cracking Noise » due to the eternal screw spinning down slowly.

Important :

- A visual inspection of all the points presented of the daily inspection sheet shall be proceed at the beginning of each shift.
- At all time you can push the emergency switch buttons, the platform will stop immediately. (see View F)
- If the engine doesn't start or for any mechanical problem, refer to the troubleshooting chart at page A-32. If you cannot solve the problem with the troubleshooting chart, contact your **FRACO** representative.
- The emergency engine shall be start and tested every day during the daily inspection.

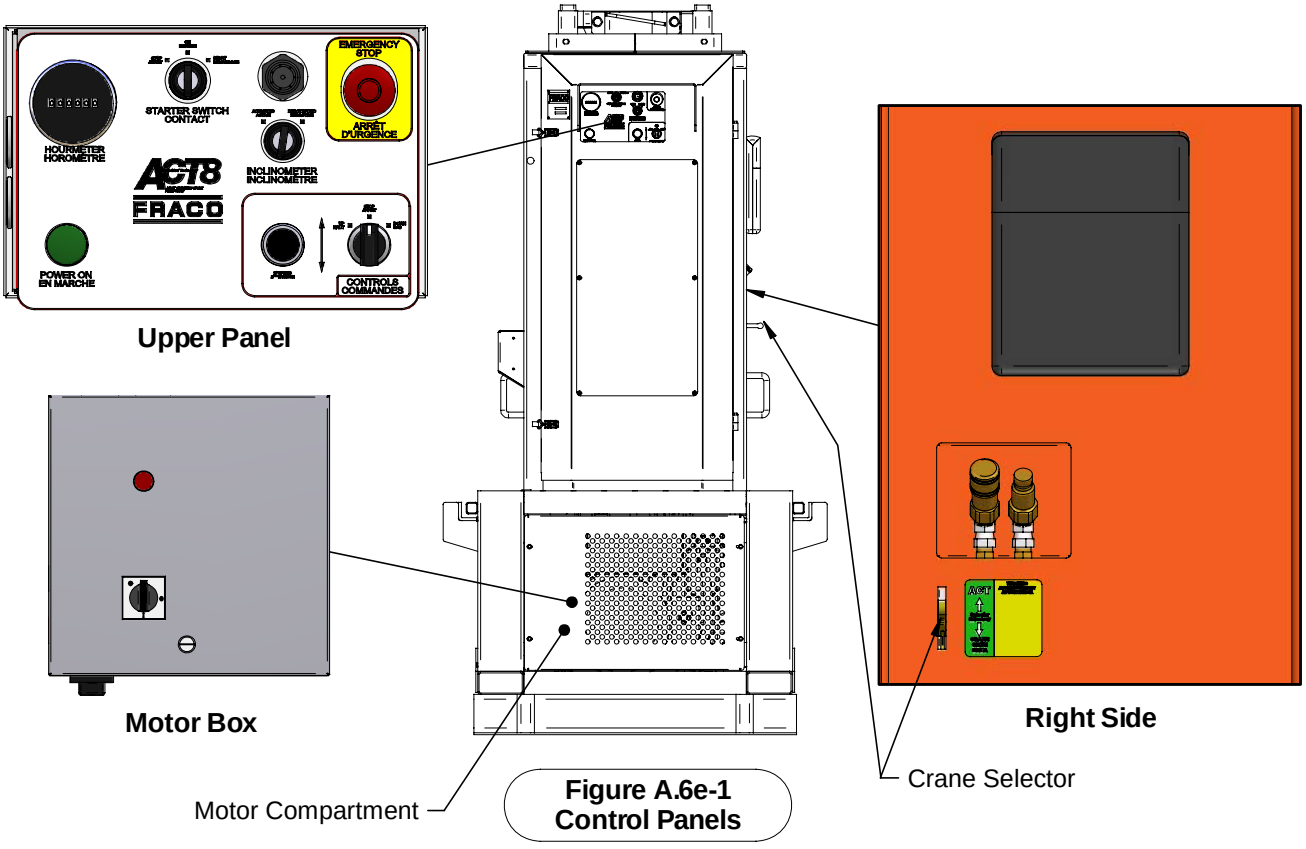
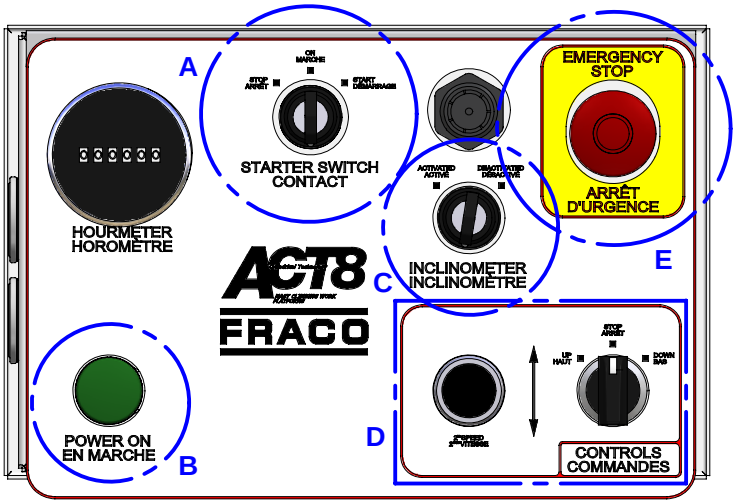
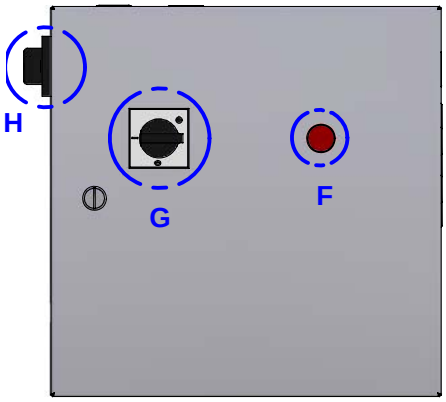


Figure A.6e-1 Control Panels

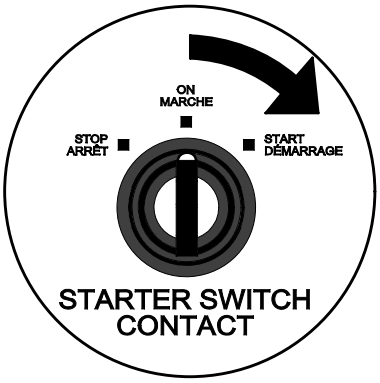
Operation of the Elevating Unit (Electric Model 2006 Without Arm) (continued)



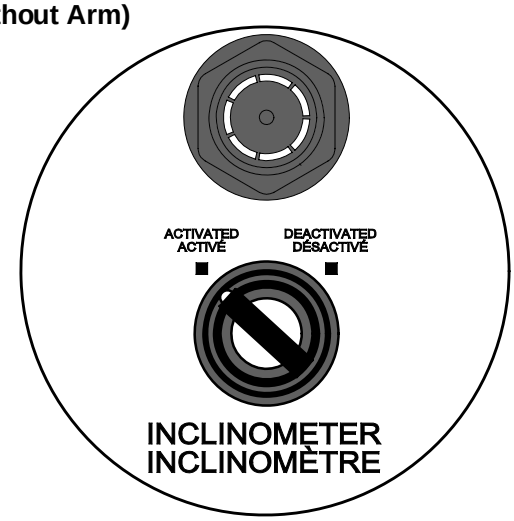
Control Box (Without Arm)



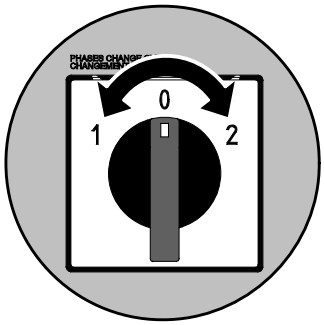
Motor Box



View A
Starter Switch Key

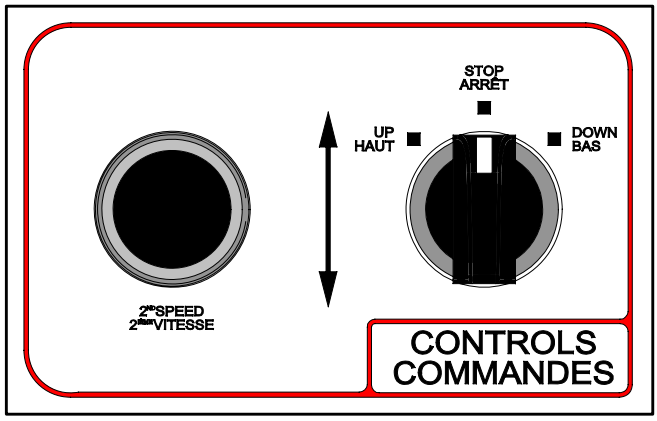


View C
Inclinometer + Buzzer

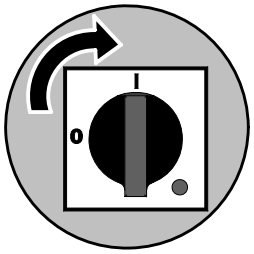


View H
Phases Changement
Selector

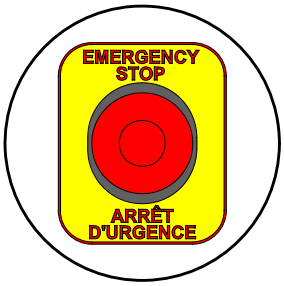
View
Power ON



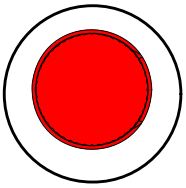
View D
2nd Speed + Selector UP and DOWN



View G
Interruptor Level



View E
Emergency Stop Button



View F
LED

Figure A.6e-2
Center Panel

Operation of the Elevating Unit (Gasoline Model 2006 Without Arm) (continued)

Step 1 (Before ignition)

1.1- Make sure the trajectory of the platform is free of obstacles.
1.2- Make sure the emergency switch buttons is disengage.
1.3- Make sure the accessories selector is in “ACT” position. (see Figure A.6f-1 and View Right Side)

Step 2 (Ignition) (see Figure A.6f-1 and A.6f-2)

2.1- Pull the choke lever of the engine located under the air filter. (see Gasoline Engine)
2.2- Turn the starter switch key to the start position. (see View A)
2.3- When the engine is started, let the starter swith key go back to it initials position.
2.4- When the engine is running, wait a couple of minutes until the engine reach its normal temperature of operation and push back the choke to it initial position.

Step 3 (Ascending) (see Figure A.6f-1 and A.6f-2)

3.1- Turn and hold the “UP” selector for elevate the platform. (see View C)
3.2- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View C)
3.3- Once you reach the desire working heights, release the “UP” selector and wait until the elevating unit rest on the safety.
3.4- Turn the starter switch key to the “OFF” position to stop the engine.

Step 4 (Lowering) (see Figure A.6f-1 and A.6f-2)

4.1- Proceed with steps 1 and 2 in complete.
4.2- Turn and hold the ”DOWN” selector for lower the platform (see View C)
4.3- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View C)
4.4- Once the desire working height is reach, release the “DOWN” selector and wait until the elevating unit rest on the safety.
4.5- Turn the starter switch key to the “OFF” position to stop the motor.

Note:

- The 2nd speed doesn’t work if there is too much load on the platform.
- If you turn off the engine before the elevating unit is resting on the safety, the platform will go down to rest on the safety units own. You’ll ear a light “Cracking Noise” due to the eternal screw spinning down slowly.

Important :

- A visual inspection of all the points presented of the daily inspection sheet shall be proceed at the beginning of each shift.
- At all time you can push the emergency switch buttons, the platform will stop immediately. (see View D)
- If the engine doesn’t start or for any mechanical problem, refer to the troubleshooting chart at page A-32. If you cannot solve the problem with the troubleshooting chart, contact your **FRACO** representative.
- The emergency engine shall be start and tested every day during the daily inspection.

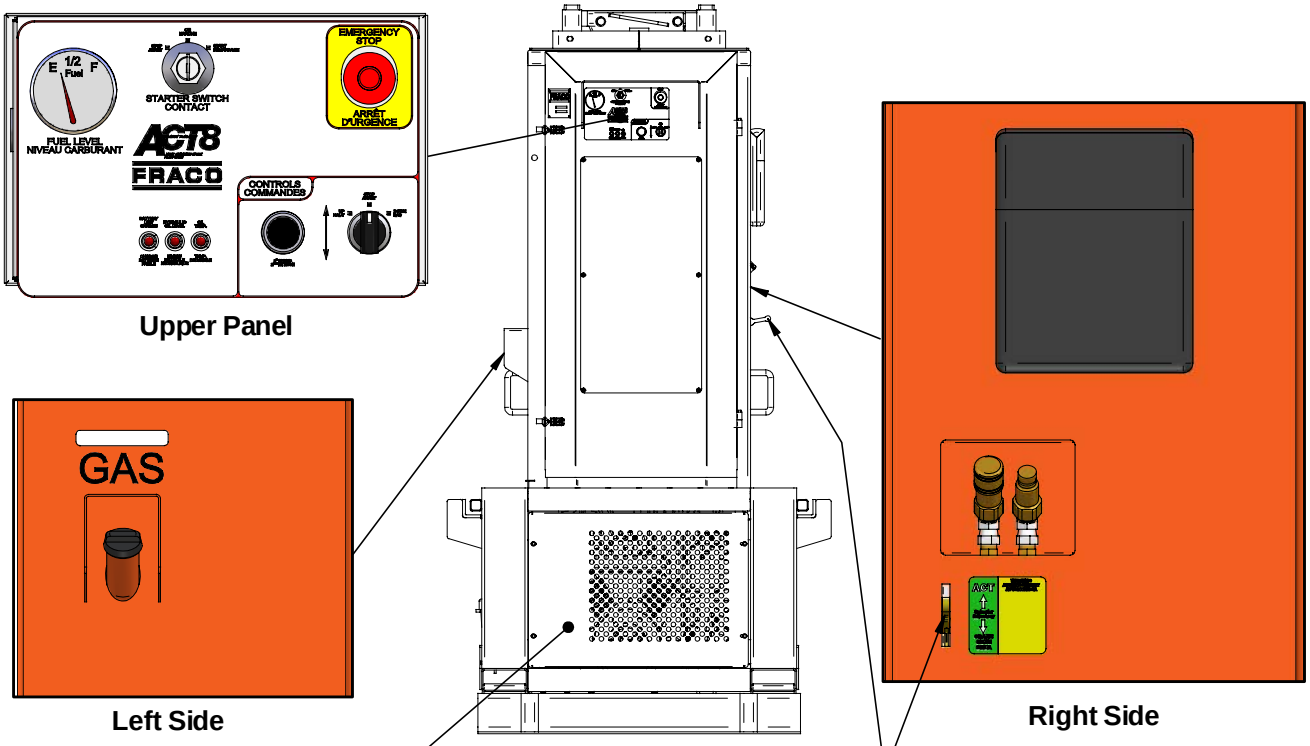
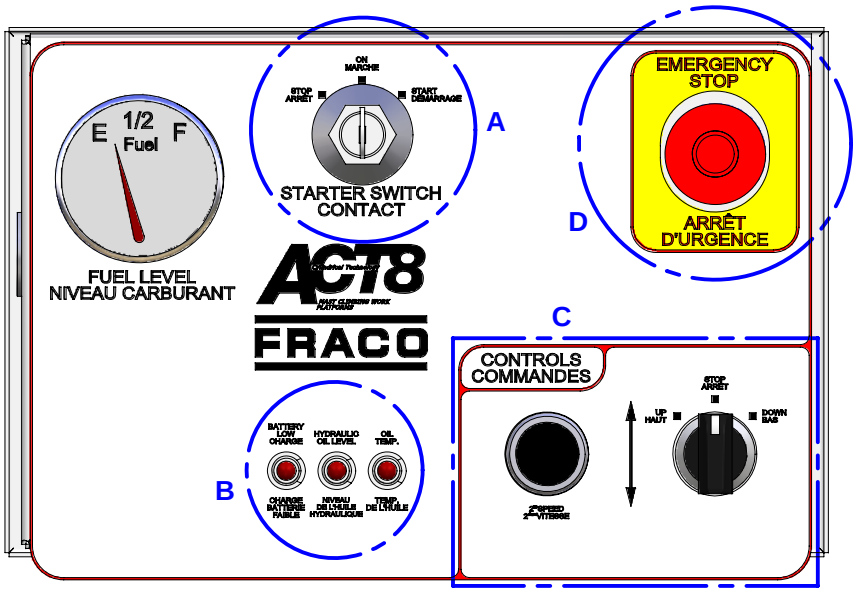
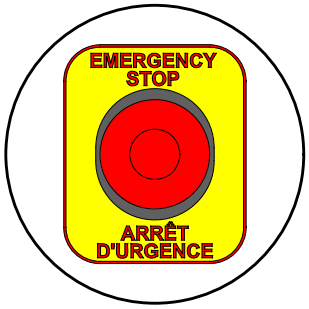


Figure A.6f-1
Control Panels

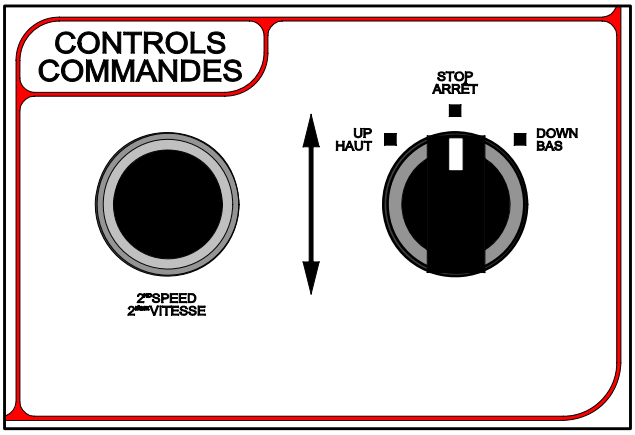
Operation of the Elevating Unit (Gasoline Model 2006 Without Arm) (continued)



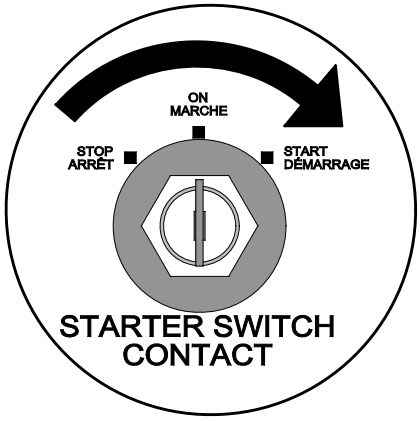
Control Box (Without Arm)



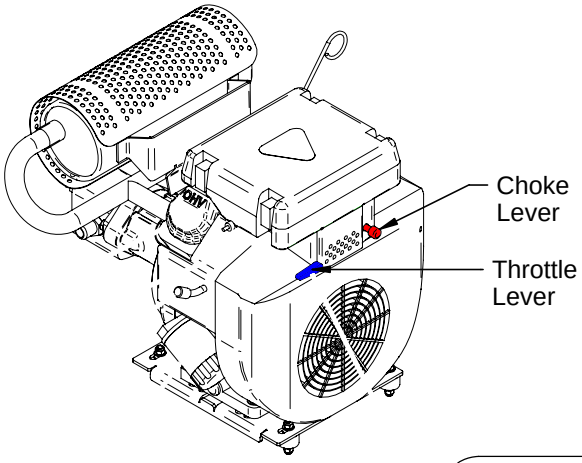
View D
Emergency Stop Button



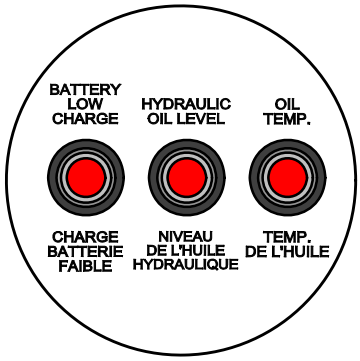
View C
2nd Speed + Selector UP and DOWN



View A
Starter Switch Key



Gasoline Engine



View B
LED

Figure A.6f-2
Center Panel

Operation of the Elevating Unit (Old Diesel Model With Arm)

Step 1 (Before ignition)

1.1- Make sure the trajectory of the platform is free of obstacles.
1.2- Make sure the emergency switch buttons is disengage.
1.3- Make sure the accessories selector is in “ACT” position. (see Figure A.6g-1 and View Right Side)

Step 2 (Ignition) (see Figure A.6g-1 and A.6g-2)

2.1- Turn the starter switch key counterclockwise to “PREHEATING” position. (see View A)
2.2- Wait for the “GLOW LAMP LED” to close. (see View C)
2.3- Turn the starter switch key clockwise to start the engine. (see View A)
2.4- Wait a couple of minutes so the engines reach its normal temperature of operation.

Step 3 (Ascending) (see Figure A.6g-1 and A.6g-2)

3.1- Push the “UP” buttons to elevate the platform. (see View D)
3.2- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View D)
3.3- Release the “UP” buttons once the working height is reach and push on the descending activation buttons located on the descent arm so the elevating rest on the safety.
3.4- Turn the starter switch key to the “OFF” position to shut off the engine.

Step 4 (Lowering) (see Figure A.6g-1 and A.6g-2)

4.1- Proceed with steps 1 and 2 in complete.
4.2- Push the “UP” buttons to elevate the platform a couple of inches in order to liberate the safety, pull the descent arm and release the “UP” buttons. (see View D)
4.3- Hold the descent arm and push the descending activation buttons located on the extremity of the arm.
4.4- The descent arm will return to it initial position to reengage the safety, you have to pull it back every time until you reach the desire working heights.
4.5- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View D)
4.6- Once at the desire working heights, release the descent arm and hold the decending activation buttons until the elevating unit rest on the safety.
4.7- Turn the starter swith key to the “OFF” position to shut off the engine.

Note:

- The 2nd speed doesn’t work if there is too much load on the platform.
- If you turn off the engine before the elevating unit is resting on the safety, the platform will go down to rest on the safety units own. You’ll ear a light “Cracking Noise” due to the eternal screw spinning down slowly.

Important :

- A visual inspection of all the points presented of the daily inspection sheet shall be proceed at the beginning of each shift.
- At all time you can push the emergency switch buttons, the platform will stop immediately. (see View F)
- If the engine doesn’t start or for any mechanical problem, refer to the troubleshooting chart at page A-32. If you cannot solve the problem with the troubleshooting chart, contact your **FRACO** representative.
- The emergency engine shall be start and tested every day during the daily inspection.

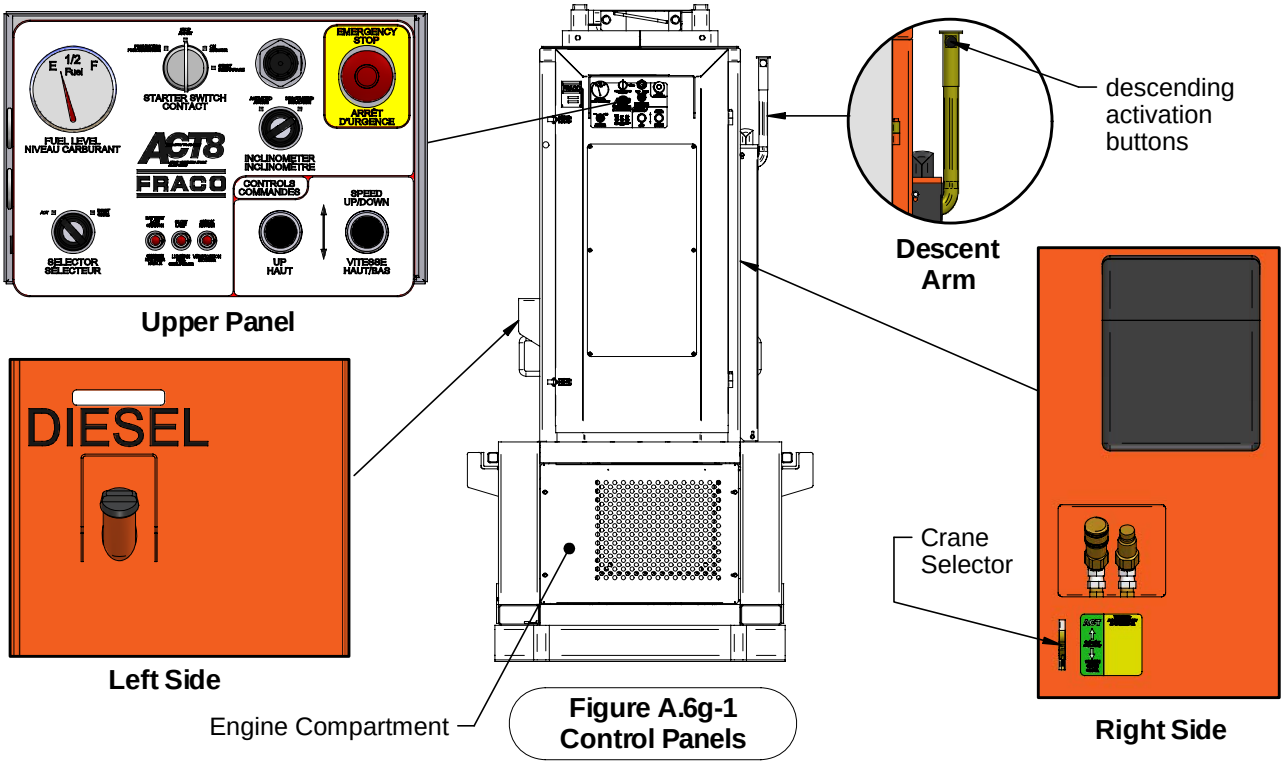
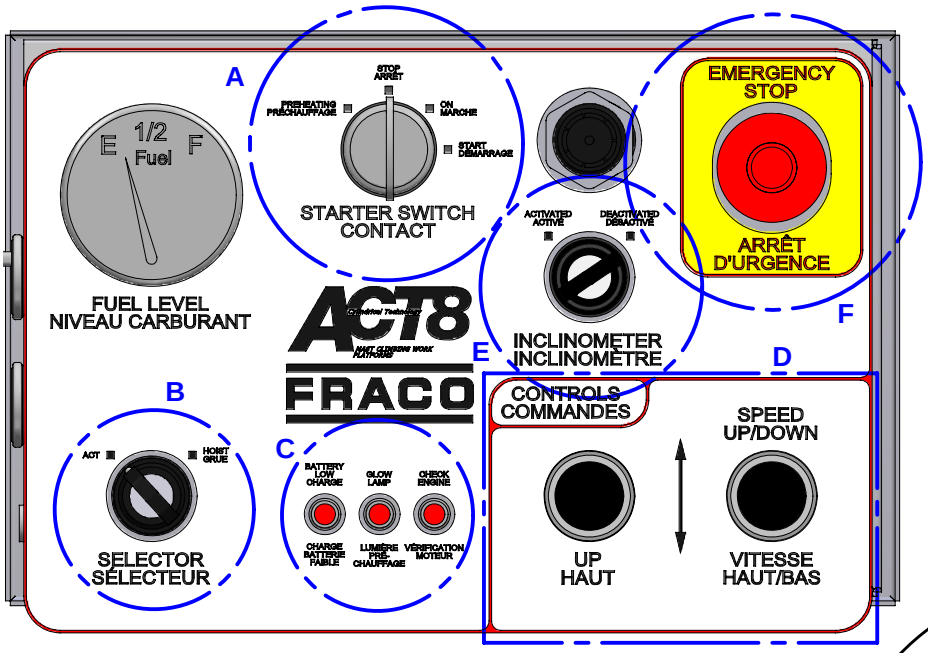
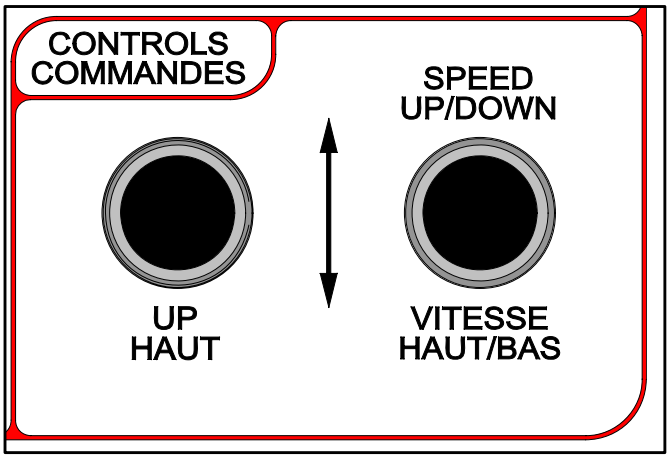


Figure A.6g-1 Control Panels

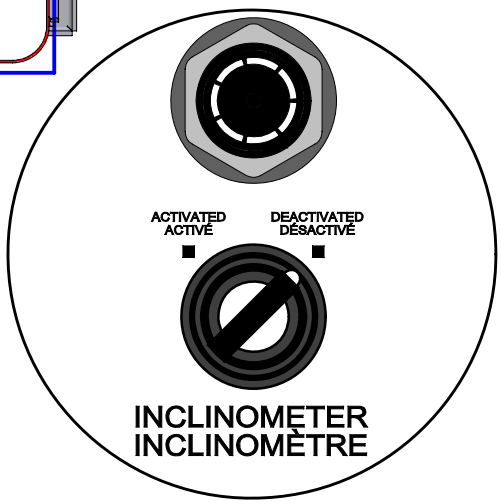
Operation of the Elevating Unit (Old Diesel Model With Arm) (continued)



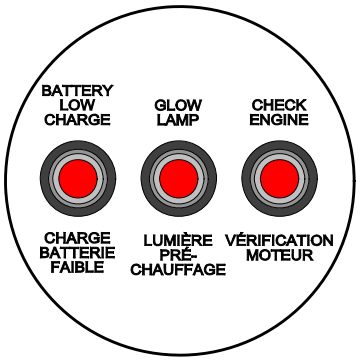
Control Box (Without Arm)



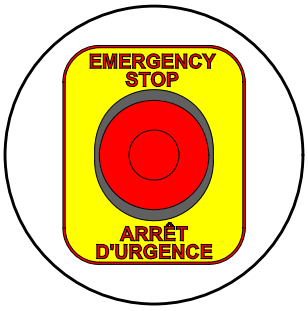
View D
UP and DOWN Button + Speed



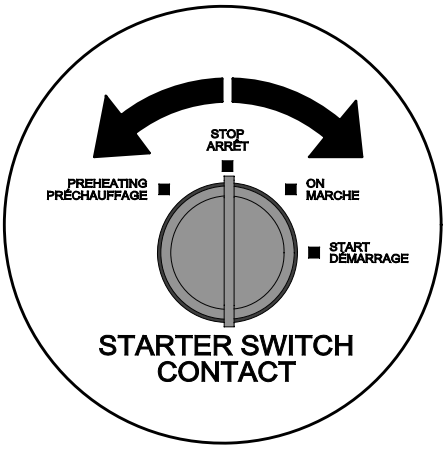
View E
Inclinometer + Buzzer



View C
LED



View F
Emergency Stop Button



View A
Starter Switch Key

Figure A.6g-2
Center Panel

Operation of the Elevating Unit (Old Electric Model With Arm) (continued)

Step 1 (Before activation)

1.1- Make sure the trajectory of the platform is free of obstacles.
1.2- Make sure the emergency switch buttons is disengage.
1.3- Make sure the accessories selector is in « ACT » position. (see Figure A.6h-1 and View Right Side)

Step 2 (Activation) (see Figure A.6h-1 and A.6h-2)

2.1- On the motor box, turn the interruptor lever to the « I » position. (see Motor Box and View G)
2.2- If Red LED is on, turn the phases selector to the « 1 » or « 2 ». This phases selector is located on the side of the motor box. (see Motor Box, View H and View F)
2.3- Turn the starter switch key to the « ON » position. The Power ON LED lights on (see View A and View B)
2.4- Once the motor is started, release the starter switch key.

Step 3 (Ascending) (see Figure A.6h-1 and A.6h-2)

3.1- Push the « UP » buttons to elevate the platform. (see View D)
3.2- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View D)
3.3- Release the « UP » buttons once the working height is reach and push on the descending activation buttons located on the descent arm so the elevating rest on the safety.
3.4- Turn the starter switch key to the « OFF » position and turn the interrruptor lever to the « O » position for shut off the engine.

Step 4 (Lowering) (see Figure A.6h-1 and A.6h-2)

4.1- Proceed with steps 1 and 2 in complete.
4.2- Push the « UP » buttons to elevate the platform a couple of inches in order to liberate the safety, pull the descent arm and release the « UP » buttons. (see View D)
4.3- Hold the descent arm and push the descending activation buttons located on the extremity of the arm.
4.4- The descent arm will return to it initial position to reengage the safety, you have to pull it back every time until you reach the desire working heights.
4.5- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View D)
4.6- Once at the desire working heights, release the descent arm and hold the decending activation buttons until the elevating unit rest on the safety.
4.7- Turn the starter switch key to the « OFF » position and turn the interrruptor lever to the « O » position for shut off the engine.

Note:

- The 2nd speed doesn't work if there is too much load on the platform.
- If you turn off the engine before the elevating unit is resting on the safety, the platform will go down to rest on the safety units own. You'll ear a light « Cracking Noise » due to the eternal screw spinning down slowly.

Important :

- A visual inspection of all the points presented of the daily inspection sheet shall be proceed at the beginning of each shift.
- At all time you can push the emergency switch buttons, the platform will stop immediately. (see View E)
- If the engine doesn't start or for any mechanical problem, refer to the troubleshooting chart at page A-32. If you cannot solve the problem with the troubleshooting chart, contact your **FRACO** representative.
- The emergency engine shall be start and tested every day during the daily inspection.

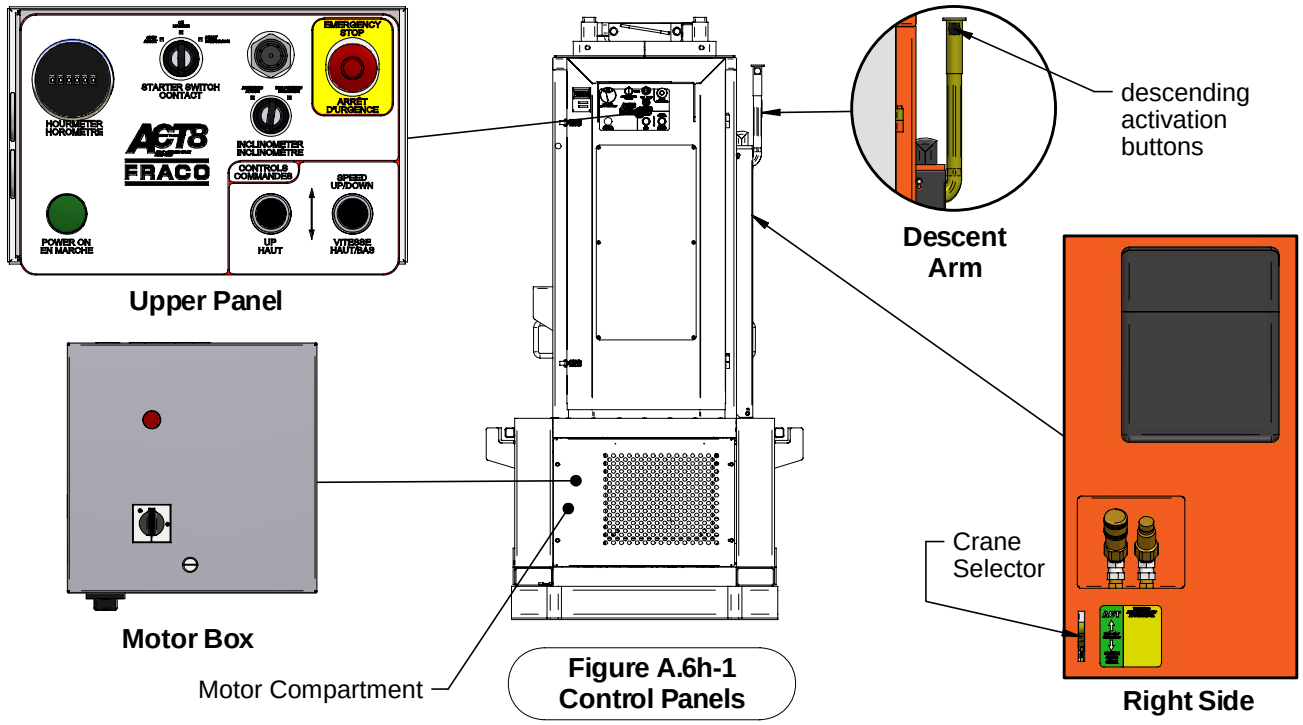
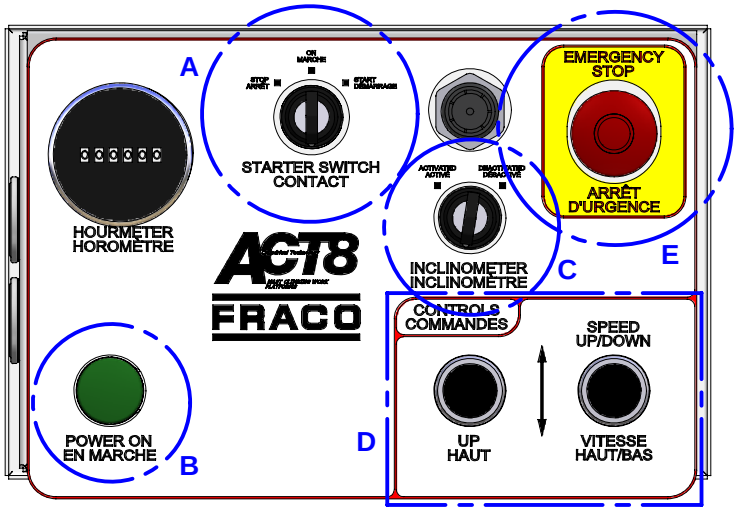
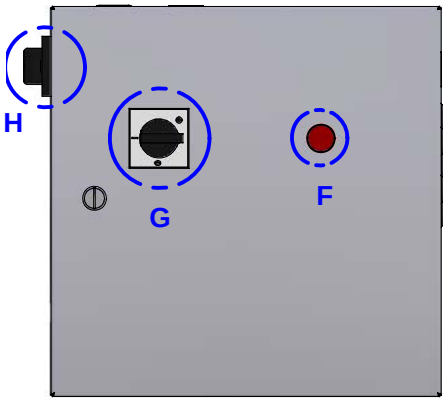


Figure A.6h-1 Control Panels

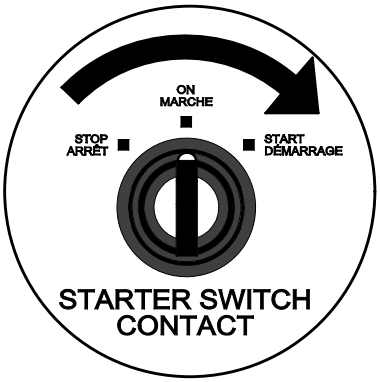
Operation of the Elevating Unit (Old Electric Model With Arm) (continued)



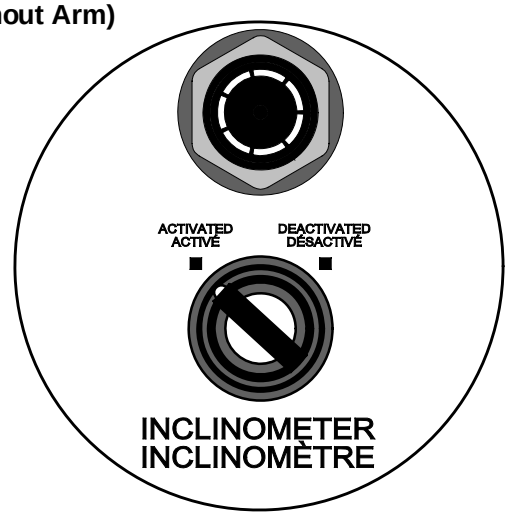
Control Box (Without Arm)



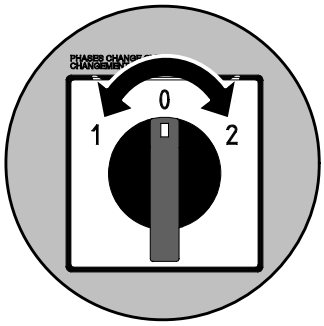
Motor Box



View A
Starter Switch Key

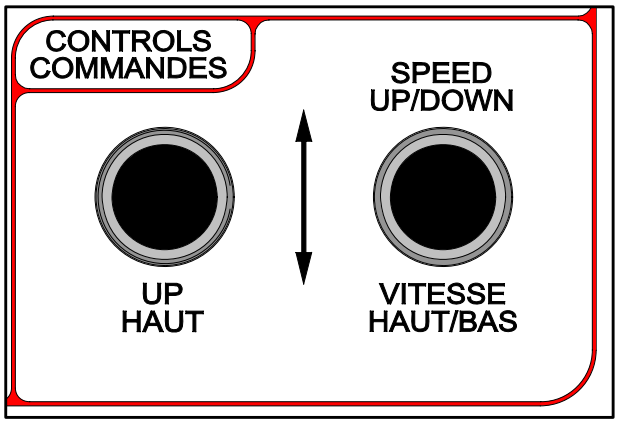


View C
Inclinometer + Buzzer

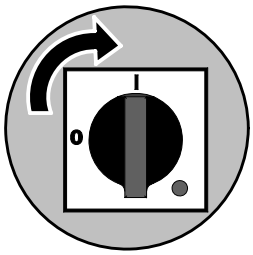


View H
Phases Selector

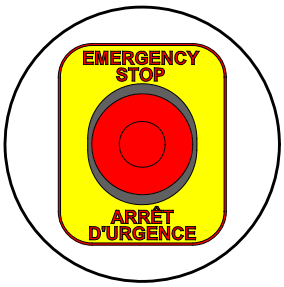
View B
Power ON



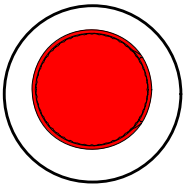
View D
UP and DOWN Button + Speed



View G
Interruptor Level



View E
Emergency Stop Button



View F
Red LED

Figure A.6h-2
Center Panel

Operation of the Elevating Unit (Old Gasoline Model With Arm) (continued)

Step 1 (Before ignition)

1.1- Make sure the trajectory of the platform is free of obstacles.
1.2- Make sure the emergency switch buttons is disengage.
1.3- Make sure the accessories selector is in « ACT » position. (see Figure A.6j-1 and View Right Side)

Step 2 (Ignition) (see Figure A.6j-1 and A.6j-2)

2.1- Pull the choke lever of the engine located under the air filter. (see Gasoline Engine)
2.2- Turn the starter switch key to the start position. (see View A)
2.3- When the engine is started, let the starter swith key go back to it initials position.
2.4- When the engine is running, wait a couple of minutes until the engine reach its normal temperature of operation and push back the choke to it initial position.

Step 3 (Ascending) (see Figure A.6j-1 and A.6j-2)

3.1- Push the « UP » buttons to elevate the platform. (see View D)
3.2- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View D)
3.3- Release the « UP » buttons once the working height is reach and push on the descending activation buttons located on the descent arm so the elevating rest on the safety.
3.4- Turn the starter switch key to the « OFF » position to shut off the engine.

Step 4 (Lowering) (see Figure A.6j-1 and A.6j-2)

4.1- Proceed with steps 1 and 2 in complete.
4.2- Push the « UP » buttons to elevate the platform a couple of inches in order to liberate the safety, pull the descent arm and release the « UP » buttons. (see View D)
4.3- Hold the descent arm and push the descending activation buttons located on the extremity of the arm.
4.4- The descent arm will return to it initial position to reengage the safety, you have to pull it back every time until you reach the desire working heights.
4.5- You can activate the 2nd speed by pushing the 2nd speed buttons. (see View D)
4.6- Once at the desire working heights, release the descent arm and hold the decending activation buttons until the elevating unit rest on the safety.
4.7- Turn the starter switch key to the « OFF » position to shut off the engine.

Note:

- The 2nd speed doesn't work if there is too much load on the platform.
- If you turn off the engine before the elevating unit is resting on the safety, the platform will go down to rest on the safety units own. You'll ear a light « Cracking Noise » due to the eternal screw spinning down slowly.

Important :

- A visual inspection of all the points presented of the daily inspection sheet shall be proceed at the beginning of each shift.
- At all time you can push the emergency switch buttons, the platform will stop immediately. (see View F)
- If the engine doesn't start or for any mechanical problem, refer to the troubleshooting chart at page A-32. If you cannot solve the problem with the troubleshooting chart, contact your **FRACO** representative.
- The emergency engine shall be start and tested every day during the daily inspection.

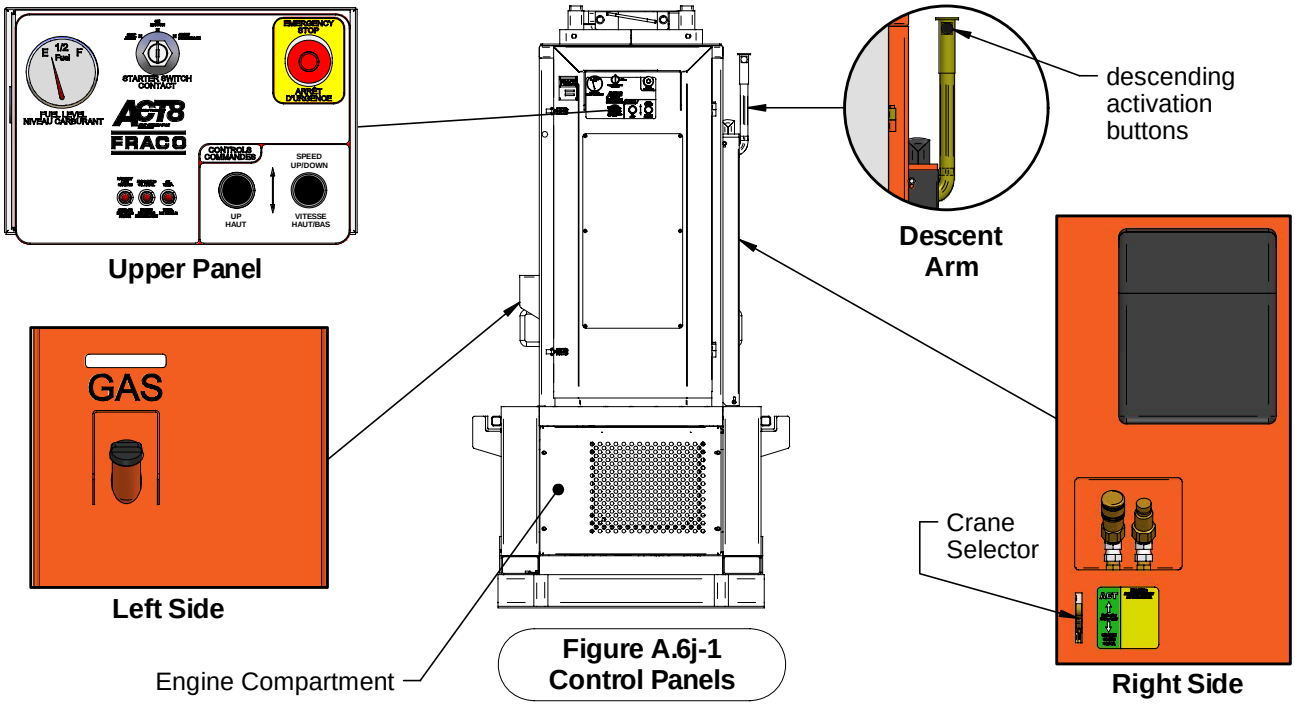
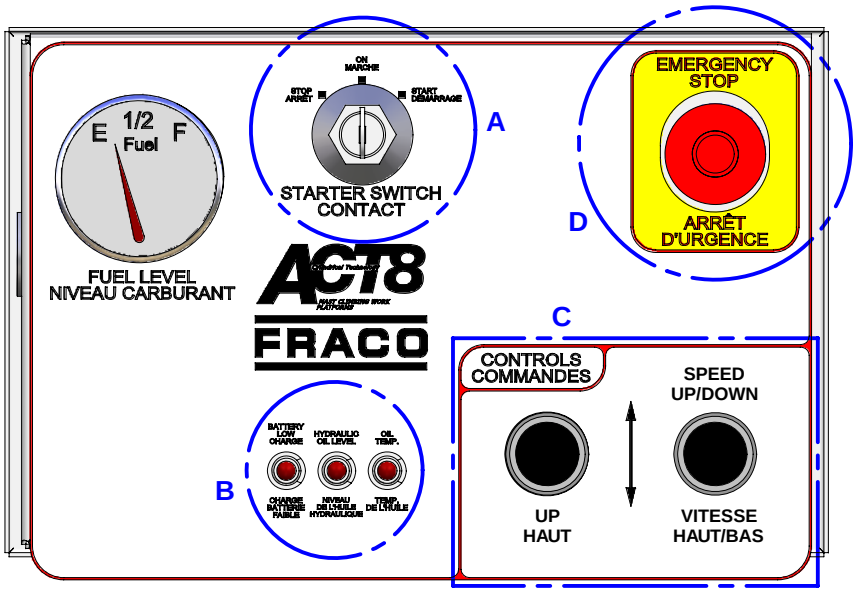
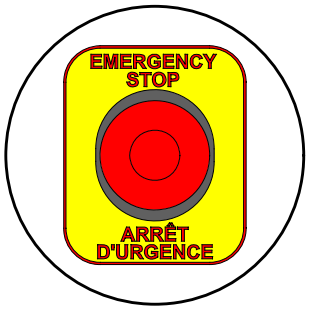


Figure A.6j-1 Control Panels

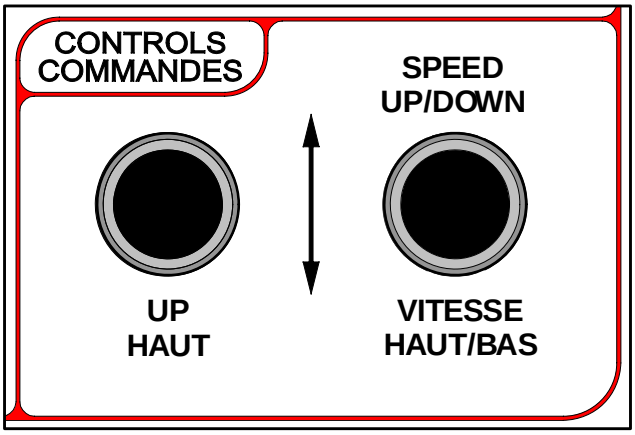
Operation of the Elevating Unit (Old Gasoline Model With Arm) (continued)



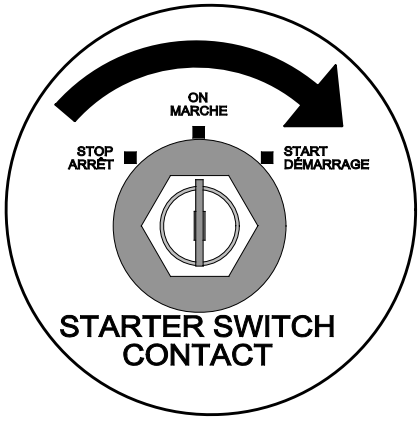
Control Box (Without Arm)



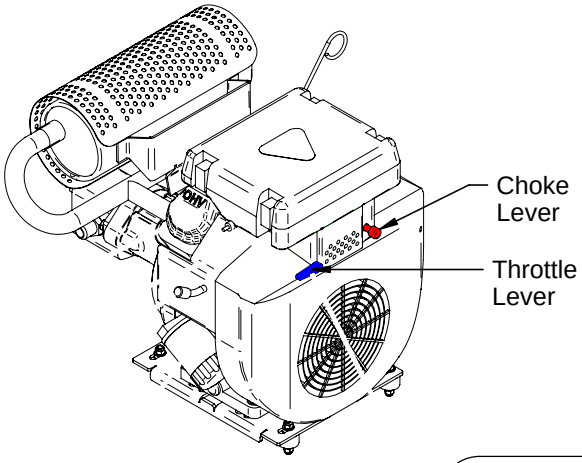
View D
Emergency Stop Button



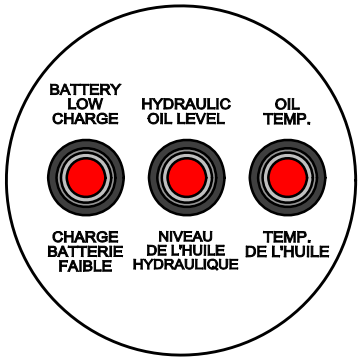
View C
UP and DOWN Button + Speed



View A
Starter Switch Key



Gasoline Engine



View B
LED

Figure A.6j-2
Center Panel

Operation of the Emergency Descent Device (Without Arm)

During a power failure, you can use the emergency descent device to position the platform at a lower level allowing you to a safe evacuation.

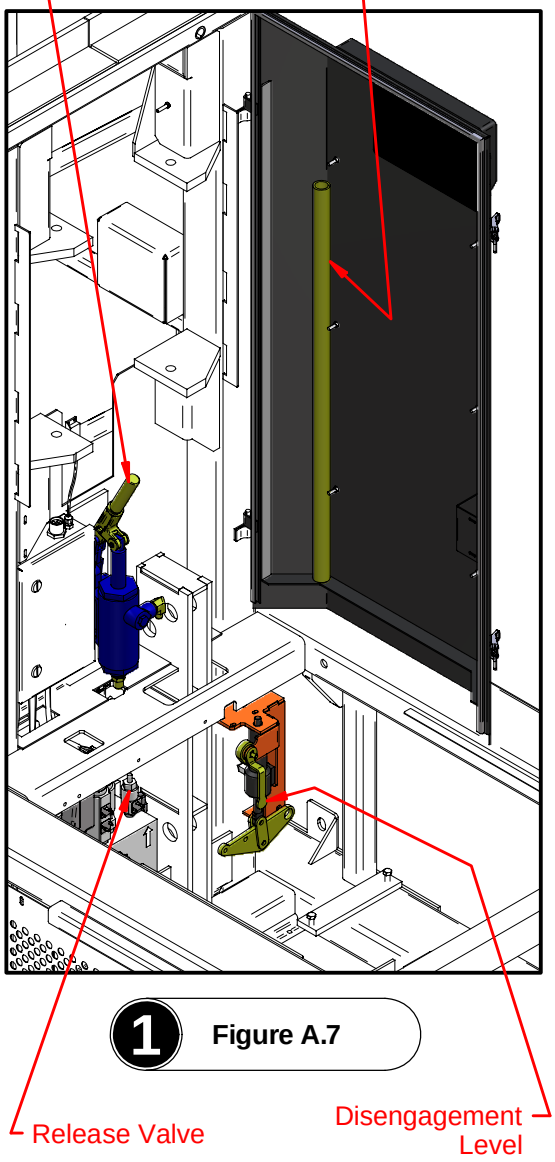
Step 1 (see Figure A.7)
1.1- Open the access door to the screw mechanism.
1.2- Take the manual pump lever found on the inside of the access door and place it on the pump.

Step 2 (see Figure A.7 and A.8)
2.1- Move the lever from front to back to elevate the platform.
2.2- Elevate the platform about 6" (150 mm) until the safety system disengages.

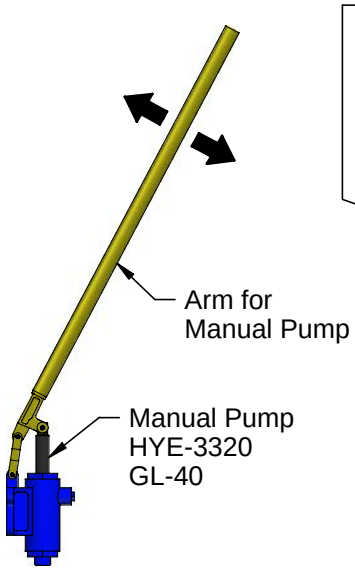
Step 3 (see Figure A.7 and A.9)
3.1- Open the fiber flooring engine cover.
3.2- Lift the disengage lever to free up the safety system.

Step 4 (see Figure A.7 and A.10)
4.1- Open the release valve.
4.2- The platform will descend by gravity.
4.3- Close the release valve once the desired height is reached.

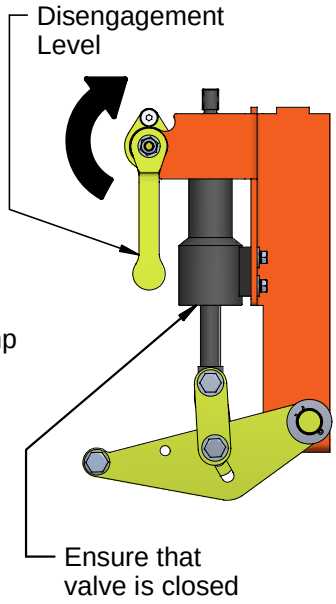
Important :
- Any malfunctions of the platform have to be repair by a mechanic certify by FRACO product before the unit is put back into service.
- After the utlisation of the emergency descent, an inspection must be executed by a certify mechanic if this was due to mechanical malfunction..



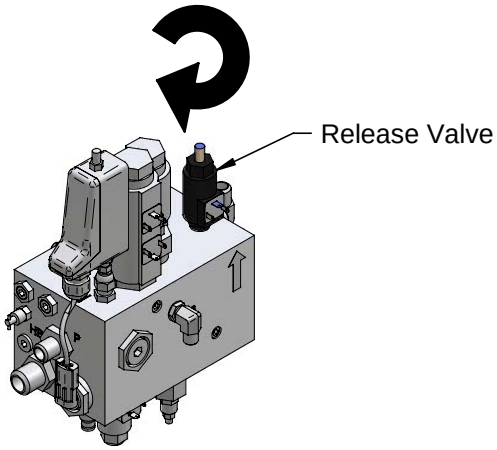
1 **Figure A.7**



2 **Figure A.8**



3 **Figure A.9**



4 **Figure A.10**

Operation of the Emergency Descent Device (With Arm) (continued)

Step 1

1.1- Make sure the trajectory of the platform is free of obstacles.

Step 2

2.1- With the handle located in the back side of the main access panel, activate the manual pump until the platform reach a couple of inches.
2.2- Turn the safety disengagement lever clockwise.
2.3- Turn the screw of the valve S5 counter clockwise, located on the hydraulic block in the engine compartment, until the platform is going down.
2.4- Let the platform go down until you reach a safe and secure level of exit.
2.5- When the platforms reach the desire height, reengage the safety with safety disengaging lever and wait for the elevating to rest on the safety.
2.6- Make sure you turn the screw of the S5 valve back to it initial positions before you leave the platform. And call your FRACO representative.

Important:

- Any malfunctions of the platform have to be repair by a mechanic certify by FRACO product before the unit is put back into service.
- After the utlisation of the emergency descent, an inspection must be executed by a certify mechanic if this was due to mechanical malfunction.

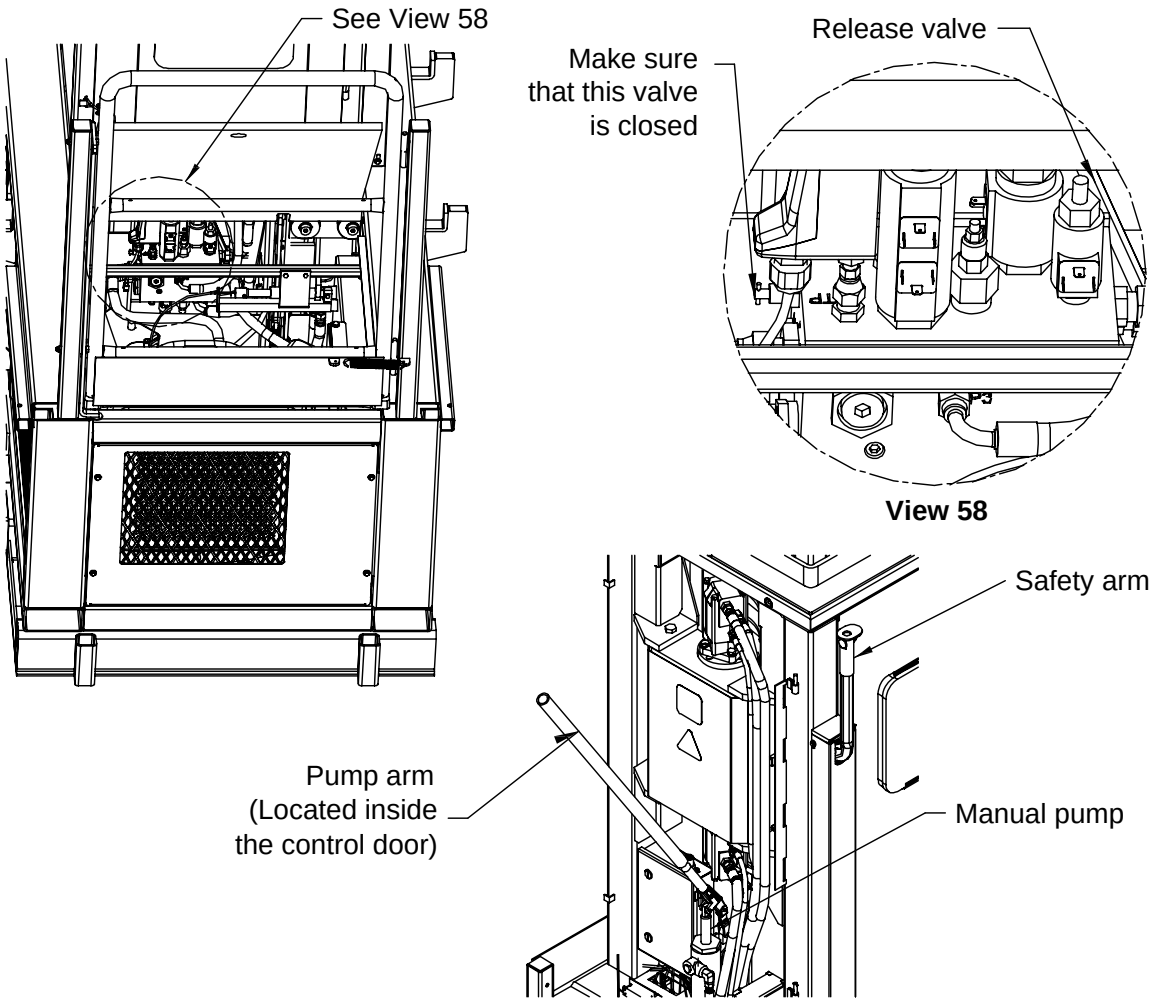


Figure A.11
Manual Pump (With Arm)

Operation of the Inclinometer

Alarm (see Figure A.12)

- The alarm is beeping when the inclination of the bridge reach +/- 3°, this indicate you that both elevating unit are not at the same level. Now you have to stop the ascending or lowering operation of 1 of the elevating unit until both unit are at the same level.

Use the Bypass (see Figure A.12)

- The platform will stop if the inclination reach 5°.
- Activate the bypass of one of the elevating unit and hold the bypass key switch to the «Bypass» position.
- Hold the bypass key switch and elevate or lower 1 elevating unit until both elevating unit are at the same level.
- Release the bypass key switch and continue the elevation or lowering operation of the platform as describe at A-10 to A-27 pages.
- When using a bridge, don't have more than 0,3 m (1'-0") difference between 2 elevating unit.

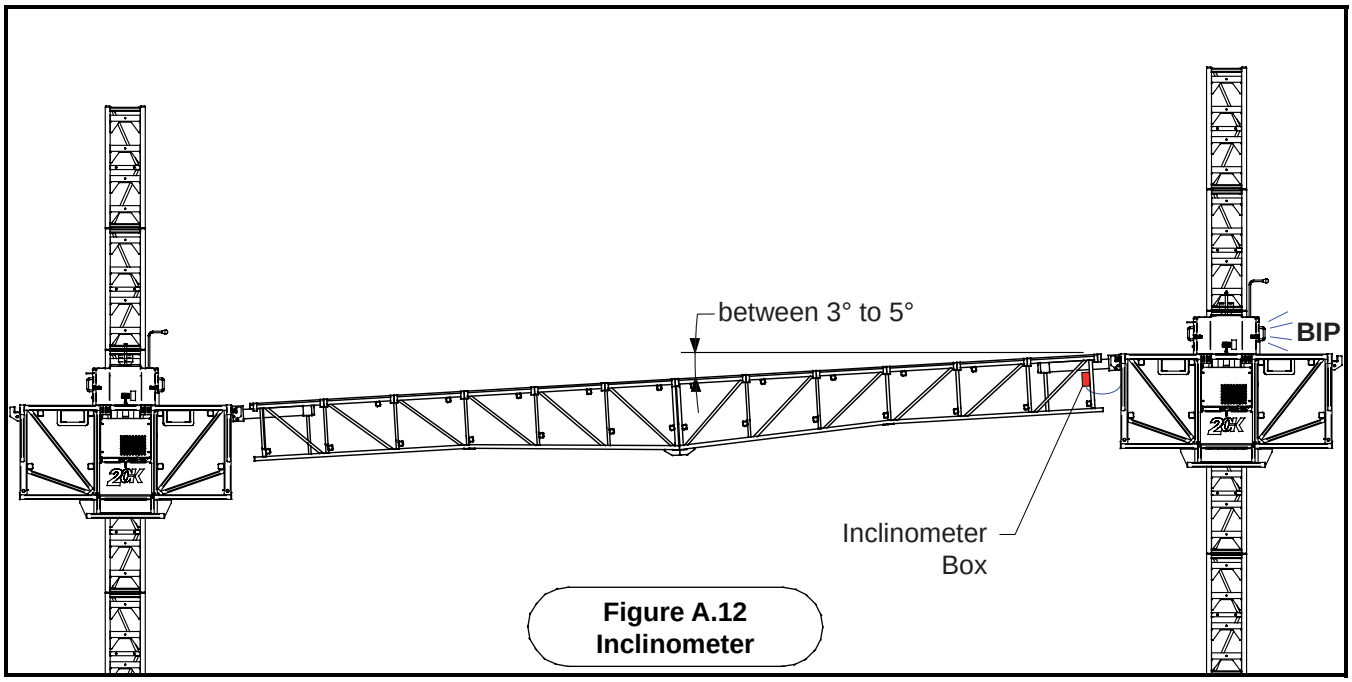


Figure A.12
Inclinometer

Technical Specifications

Description	Imperial	Metric
Maximum Length of the Platform in Single Mast Maximum Length of the Platform in Double Mast	Full Load 56'-8" Reduce Load 63'-4" Full Load 118'-8" Reduce Load 125'-4"	Full Load 17,3 m Reduce Load 19,3 m Full Load 36,2 m Reduce Load 38,2 m
Maximum Load Capacity	8 000 lb / mast	3 630 kg / mast
Raising Speed	0 to 35'-0" / minute (electric) 0 to 38'-0" / minute (diesel)	0 to 10,7 m / minute (electric) 0 to 11,5 m / minute (diesel)
Raising Speed ***Only Available in Certain Country***	0 to 39'-0" / minute (gasoline)	0 to 11,9 m / minute (gasoline)
Maximum Depth of Upper Working Area (depth of the section + depth of the planks)	5'-10" + 5'-0" = 10'-10"	1,78 m + 1,5 m = 3,28 m
Maximum Depth of Lower Working Area (depth of the planks)	5'-0"	1,5 m
Maximum Height (with ground base with anchoring devices)	550'-0"	168,0 m
Maximum Height (with freestanding base without anchoring devices)	45'-0"	13,7 m
Standard Distance Between Anchoring Devices	30'-0"	9,1 m
Rasing System	Hydraulic Raising System with Endless Screw	
Motor Types (electric)	20 HP, 400 VAC, 50 HZ, 20 A	
Engine Types (diesel)		
Engine Types (gasoline) ***Only Available in Certain Country***	Honda 24 HP, GX670	
Elevating Unit Dimensions (length x depth x height) / weight	3'-5" x 5'-9" x 7'-2" / 3 175 lb (electric) 3'-5" x 5'-9" x 7'-2" / 2 875 lb (diesel) 3'-5" x 5'-9" x 7'-2" / 2 610 lb (gasoline)	1,04 m x 1,75 m x 2,18 m / 1 440 kg (electric) 1,04 m x 1,75 m x 2,18 m / 1 305 kg (diesel) 1,04 m x 1,75 m x 2,18 m / 1 185 kg (gasoline)
Freestanding Base - Dimensions (length x depth) / weight	12'-5" x 12'-11" / 2 275 lb	3,78 m x 3,94 m / 1 030 kg
Mast Section - Dimensions (length x depth x height) weight	20" x 20" x 5'-0" / 340 lb	0,5 m x 0,5 m x 1,5 m / 155 kg
No-Modular Cantilever Section Dimensions (length x depth) / weight	3'-4" x 3'-6" / 275 lb 6'-8" x 3'-6" / 455 lb 10'-0" x 3'-6" / 640 lb 10'-0" x 3'-6" / 1 000 lb Taper	1,0 m x 1,1 m / 125 kg 2,0 m x 1,1 m / 205 kg 3,0 m x 1,1 m / 290 kg 3,0 m x 1,1 m / 455 kg Taper
Modular Cantilever Section Dimensions (length x depth) / weight	3'-4" x 5'-11" / 280 lb 6'-8" x 5'-11" / 595 lb 10'-0" x 5'-11" / 830 lb 10'-0" x 5'-11" / 1 215 lb Taper	1,0 m x 1,8 m / 130 kg 2,0 m x 1,8 m / 270 kg 3,0 m x 1,8 m / 375 kg 3,0 m x 1,8 m / 550 kg Taper
No-Modular Bridge Section Dimensions (length x depth) / weight	15'-0" x 3'-6" / 1 200 lb 20'-0" x 3'-6" / 1 420 lb	4,6 m x 1,1 m / 545 kg 6,1 m x 1,1 m / 645 kg
Modular Bridge Section Dimensions (length x depth) / weight	15'-0" x 5'-11" / 1 290 lb 20'-0" x 5'-11" / 1 690 lb	4,6 m x 1,8 m / 585 kg 6,1 m x 1,8 m / 770 kg
No-Modular Central Bridge Section Dimensions (length x depth) / weight	20'-0" x 3'-6" / 1 350 lb	6,1 m x 1,1 m / 615 kg
Modular Central Bridge Section Dimensions (length x depth) / weight	20'-0" x 5'-11" / 1 660 lb	6,1 m x 1,8 m / 750 kg
Intermediar Cantilever Section Dimensions (length x depth) / weight	2'-6" x 3'-6" / 300 lb 2'-6" x 5'-11" / 310 lb 5'-0" x 5'-11" / 530 lb	752 mm x 1,1 m / 135 kg 752 mm x 1,8 m / 140 kg 1,5 m x 1,8 m / 240 kg

Troubleshooting

Motor	Problem	Potential Cause	Solution
All engines	The engine doesn't start	The emergency stop button are actived	Deactivate the emergency stop button
All engines	The platform does not rise or the engine doesn't start	The selector is in «CRANE» position	Turn the selector handle to «ACT4»
All engines	The platform doesn't move but the engine is running	Too much load or load poorly distributed	Remove the excedent load and / or distribute the load as recommended in the load distribution chart (see chapter A «Load distributions or configuration»)
Motor	**Problem**	**Potential Cause**	**Solution**
Electric motor	The motor doesn't start and the lights «POWER ON» is off	The key switch is in «STOP» position	Position the key switch to «ON»
Electric motor	The motor doesn't start and the lights «MOTOR FAULT» is on	Phases invverted (the light is on)	Switch the phase selector located on the side of the electrical box
Engine (*gasoline), diesel	The engine doesn't start	The fuel valve is closed	Open the fuel valve
Engine (*gasoline), diesel	The engine doesn't start	No fuel in the tank	Put fuel in the tank
Engine (*gasoline), diesel	The engine doesn't start	The battery is unloaded	Call the technician (diesel) and / or use the manual starter (gasoline)
Engine (*gasoline), diesel	The engine doesn't start	Oil level in the engine is too low	Put oil in the engine
Engine (*gasoline), diesel	The engine doesn't start	Fuel is contaminated	Empty out the tank and fill it up with fuel
Engine (*gasoline), diesel	The engine doesn't start	Fuel hoses blocked with contaminant	Unblock the fuel hoses
Engine (*gasoline)	The engine doesn't start	The spark plug is burn	Replace the spark plug
Engine (*gasoline)	The engine stalls or doesn't run well	The choke is in «OPEN» position	Put the choke back in «CLOSE» position
Engine (*gasoline), diesel	The engine stalls	The engine is too cold	Let the engine warm up before to use
Engine (*gasoline), diesel	The engine is smoking	Too much oil in the motor	Verify the oil level

(*) = ***Only available in certain country***
* For more information, consult the elevating unit maintenance guide
* Warning, the repair section must be used by qualified mechanic.

Maintenance

Important

The frequency and extent of the periodic inspections and tests depend on national regulations, constructors' specifications, operating conditions and frequency of use. It should not be necessary to dismantle the parts during periodic inspections unless there is a doubt as to reliability and safety. Removing the bonnets, opening the observation traps and lowering the platform into transport position are not considered dismantling.

Daily

Verify all the inspection points as describe on the daily inspection sheet. (supplied with the user's guide and the Level 1 training manual).

Monthly

Refer to data sheet inspection in your maintenance's guide.

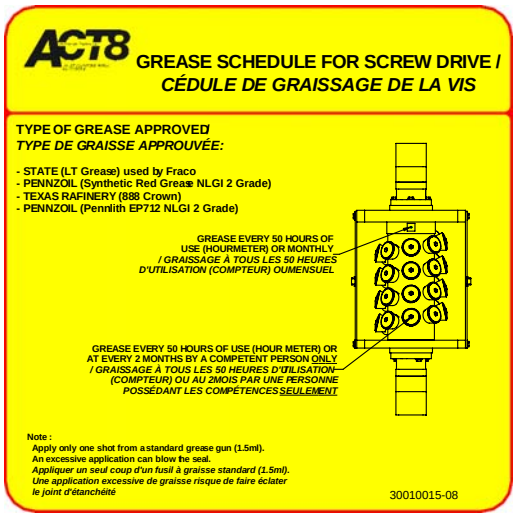


Figure A.13
Sticker Screw Greasing

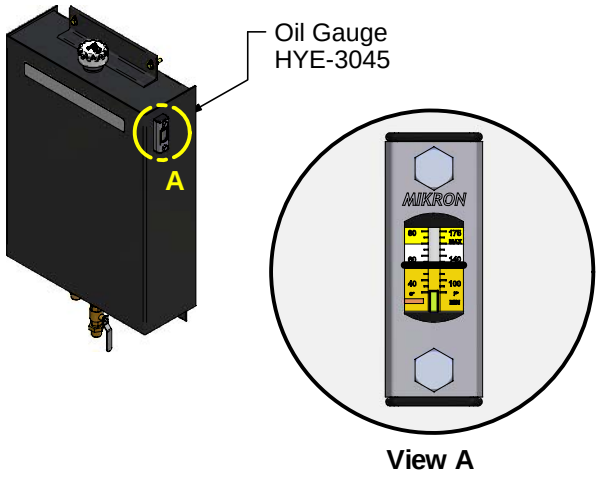


Figure A.14
Oil Gauge

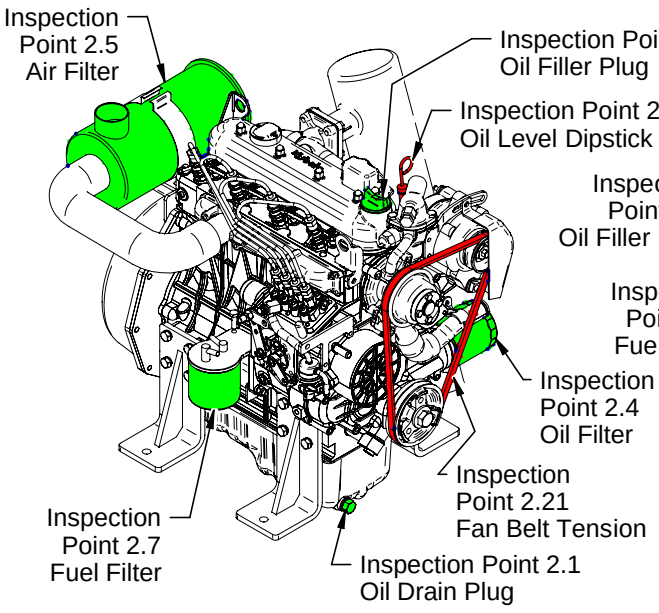


Figure A.15
Diesel Engine Maintenance

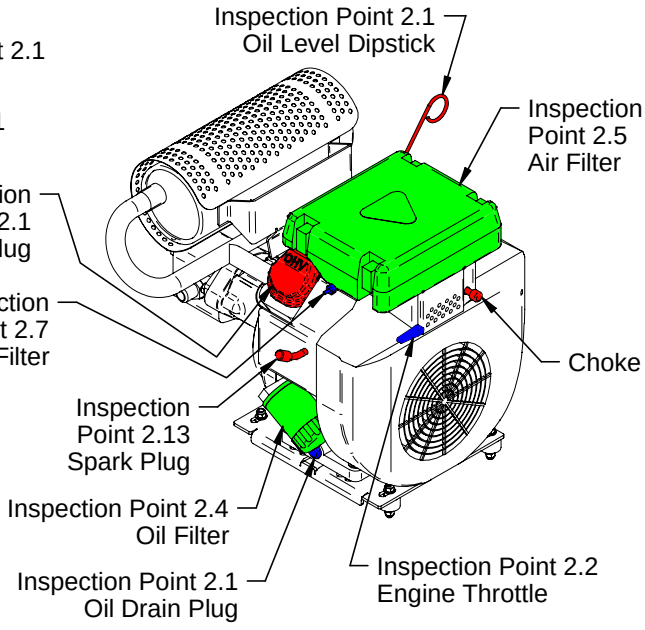


Figure A.16
Gasoline Engine Maintenance

Daily Inspection Sheet

User (Cie): _____ **Name of the job site:** _____

Address of the job site: _____
Street and address **city** **state**

Type of elevating unit: _____ **Single mast:** __ **Twin mast:** __ **Serial #:** _____ **/**_____

Freestanding: __ **Anchors:** __ **FRH on the elevating unit:** __ **Serial #:** _____ **/**_____

Note: initialize the items verified and N/A if non applicable

Inspected items	Checked	Comments
Safety perimeter		
Ground stability surrounding the base area		
Leveling of the base and mast		
Overhead clearance		
Condition of the electric cable		
Bridges and extension structure		
Tower structure, rung/railings		
Missing bolts and pins		
Condition of the platform floor		
Condition of the planks/plank ties in place		
Guardrail and protection mesh		
End mast section and/or descent limiting device		
Solidity of the wall ties, missing bolts/pins		
Load distribution on the platform		
Warning panel		
Level of fuel, engine and hydraulic oil		
Condition of the hydraulic hoses		
Condition of the electrical wire		
Battery and cables properly fixed		
User guide, daily inspection sheet		
Operation of the platform/safety mechanism		
Operation of the FRH, condition of the cable/hook		
Emergency switch buttons		
Emergency descent		

Comments: _____
_____
_____

Date: _____ **Name of the operator:** _____

Name of the employer: _____**Signature of the operator:** _____

Any irregularities or malfunction of the MCWP must be repaired by a qualified installer or mechanic, certified by Fraco products, prior to the utilization of the platform. A complete inspection of the platform must be executed every 3 months.

CHAPTER B

Elevating Unit and Bases

- Data Sheet of Elevating Unit and Bases B-2
- Ground Loads B-4
- Locating the Site and Taking Measurements. B-5
- Installation with Ground Base B-7
- Installation with Freestanding Base B-8
- Wire Mesh Protection. B-12

DATA SHEET OF ELEVATING UNIT AND BASES

Elevating Unit (10060018)	Imperial	Metric
Weight (diesel elevating unit only)	2 877 lb	1 305 kg
Weight (diesel elevating unit + ground base + first mast section)	3 968 lb	1 800 kg
Weight (electric elevating unit only)	3 175 lb	1 440 kg
Weight (electric elevating unit + ground base + first mast section)	4 266 lb	1 935 kg
Length (see Figure B.1)	3'-3"	1,0 m
Depth (working zone) (see Figure B.1)	5'-10"	1,8 m
Height (see Figure B.1)	7'-2"	2,2 m
Motion Speed (electric)	0-35' / min	0 - 10,7 m / min
Motion Speed (diesel)	0-38' / min	0 - 11,6 m / min
Lifting Capacity	8 000 lb	3 635 kg

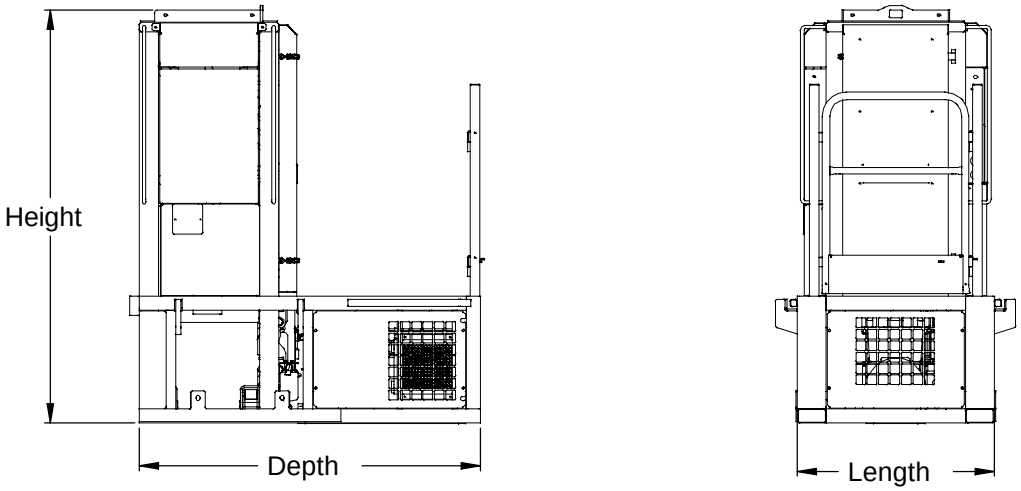


Figure B.1
Dimensions of Elevating Unit

Ground Base (14030019)	Imperial	Metric
Weight (ground base only)	750 lb	340 kg
Weight (elevating unit + ground base + first mast section)	2 950 lb	1 338 kg
Length (see Figure B.2)	3'-6"	2,3 m
Width (see Figure B.2)	6'-1 7/8"	2,3 m
Height (see Figure B.2)	2'-10 1/4"	1,6 m

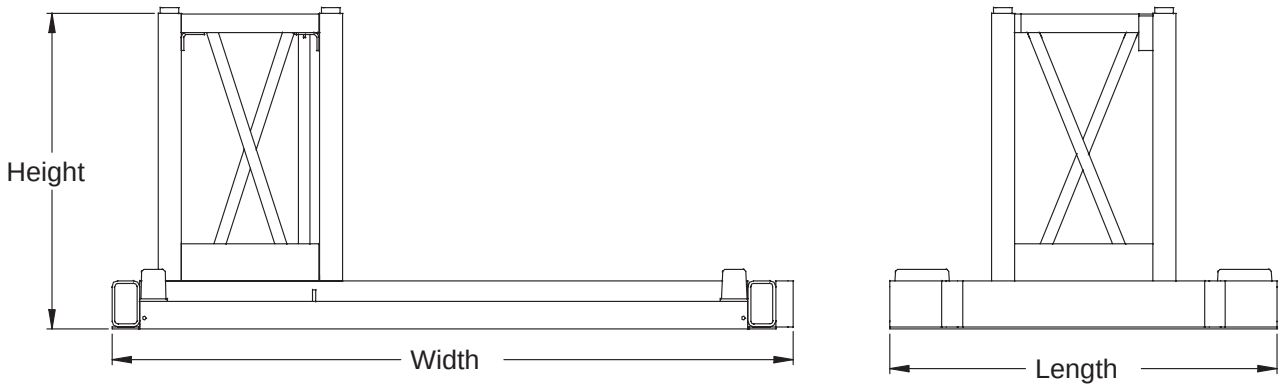


Figure B.2
Ground Base Dimensions

DATA SHEET OF ELEVATING UNIT AND BASES (CONTINUED)

Universal Freestanding Base (14030109)	**Imperial**	**Metric**
Weight (freestanding base only)	2 150 lb	975 kg
Weight (elevating unit + ground base + freestanding base+ first mast section)	5 855 lb	2 655 kg
Length (see Figure B.3)	12’-5”	3,78 m
Maximal Width (see Figure B.3)	12’-10 3/4”	3,93 m
Minimal Width (see Figure B.3)	8’-1”	2,46 m
maximal Height (see Figure B.3)	2’-5 5/8”	752 mm
Towards acceptable of the frame is 0.5° max. The «Minimum» sticker indicates the minimal position at 23” in freestanding		
Freestanding Base for ACT-8 (14030042 old version)	**Imperial**	**Metric**
Weight (freestanding base only)	2 175 lb	987 kg
Length (see Figure B.3)	12’-5”	3,78 m
Maximal Width (see Figure B.3)		
Minimal Width (see Figure B.3)	9’-6”	2,89 m
Maximal Height (see Figure B.3)	2’-1 1/2”	641 mm

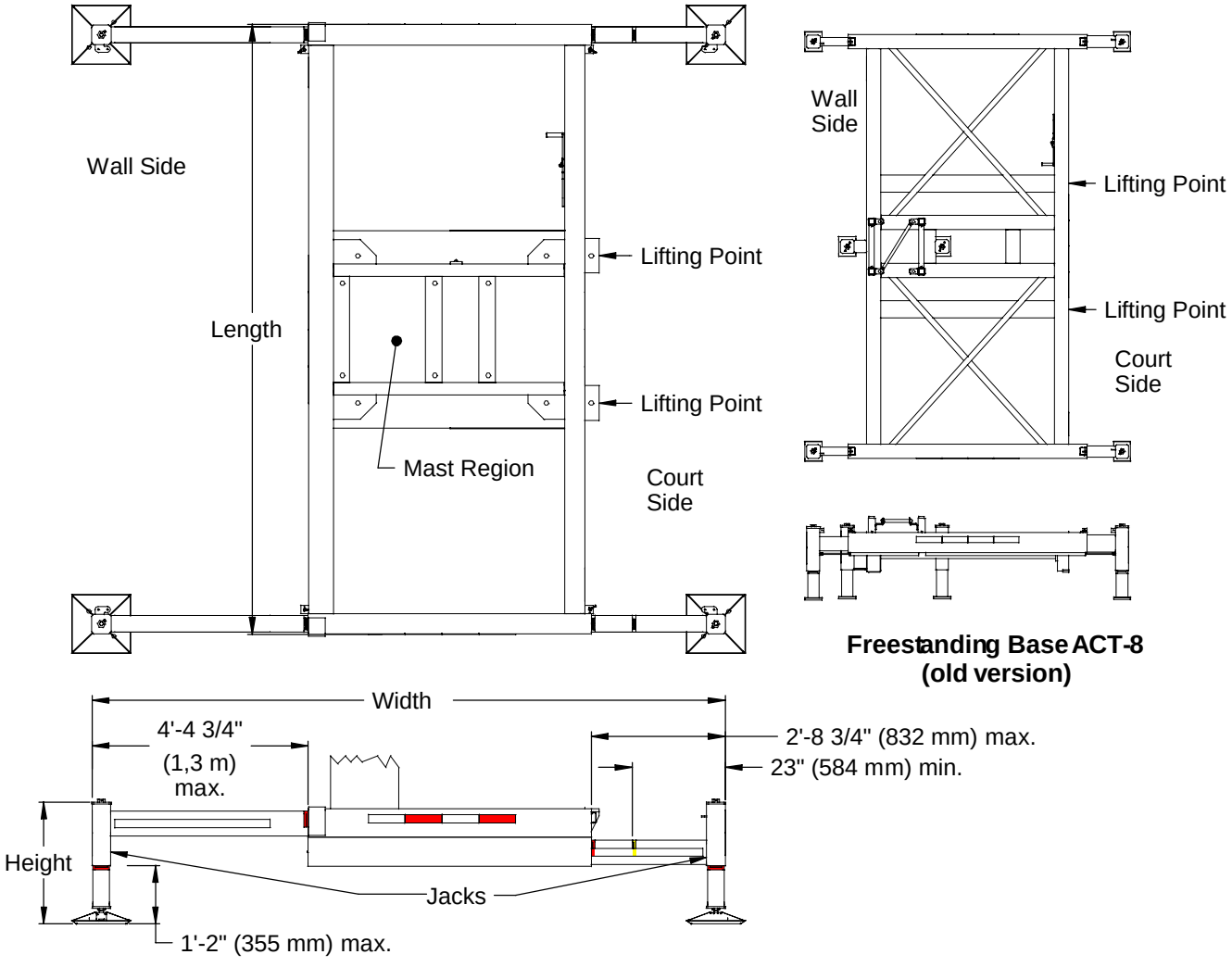


Figure B.3
Freestanding Base Dimensions

Ground Loads

- The weight bearing capacity of the ground or the roofing must be verified before any installation.
- It must be sufficient to adequately support the loads carried by the platform's base or the base's stabilizers.
- The value is given for only one mast.
- The configurations with anchors are calculated with a ground base.

Typical ground loads	
Freestanding height	**Maximum weight per jack**
13,7 m	4 700 kg
Installation height	**Maximum weight per mast**
15,2 m	12 200 kg
22,9 m	12 950 kg
30,5 m	13 700 kg
38,1 m	14 450kg
45,7 m	15 200 kg
61,0 m	16 700 kg
76,2 m	18 200 kg
91,4 m	19 700 kg
106,7 m	21 200 kg
121,9 m	22 700 kg
137,2 m	24 200 kg
152,4 m	25 700 kg

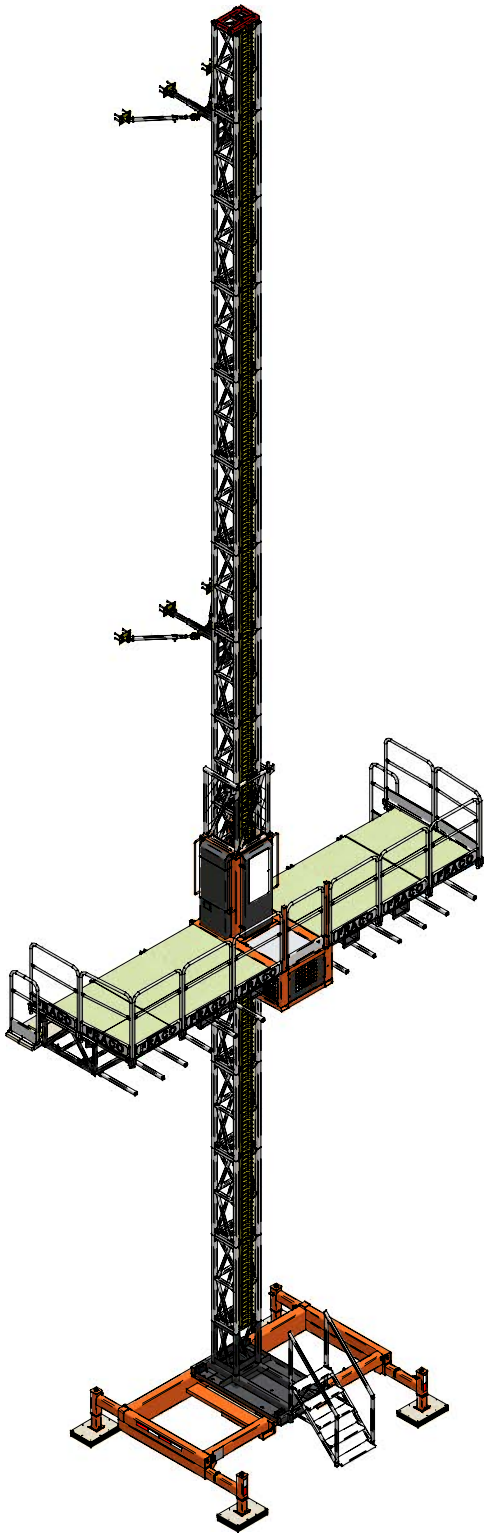


Figure B.4
Ground Loads

Localization of Installation Site :

Locating the Site and Taking Measurements

- Identify the facade of the building where the platform is to be installed.
- Identify the specific needs of the platform user (surface to be covered, work methods, pertinent architectural building details,presence of balconies, roof, number of planks used, etc.).

Ground Stability and Clearance :

- Make sure that the ground where base of the platform is located is stable, properly drained and that it have load bearing capacity required for installation (see figure of ground loads in page B-4). Excavation in zone surrounding base of the platform is forbidden during presence of the platform on this site.
- The platform must always be kept at a safe distance from any obstacles and power lines (distance depends on voltage of the power line). Contact your local utility to identify the line voltage and safe operating distance. Always keep enough clearance for movement of the platform.

Measurements and Identification of Configuration :

- The surface to be covered, work methods of the user (expansion joint, window sequence, stone pattern, etc.) and the limitations of the platform will help in identifying the required configuration. This information is collected when locating the installation site
- The distance from the building will be determined by the finished wall, the point furthest from the finished wall (balconies, window frames, gutters, roof, etc.) and the number of planks used to execute the work.
- Refer to project layout to identify the required configuration.
- Once location of elvating unit is identified, mark center and face of elevating unit on the ground.

Base Positioning (see Figure B.5 and B.6)	
Type of Installation	**« L »**
Without plank (minimum distance from finished wall)	8” (200 mm) max.
Two (2) planks (standard distance from finished wall)	28” (710 mm)
Five (5) planks (maximum distance from finished wall)	5’-3” (1,6 m) max.
* Contact the engineering department FRACO for distances higher than those indicated in table * Calculation of the distance « L » depends on width of the planks 10” (250 mm) * The distance in between two (2) platforms is 14” (350 mm)	

Project Layout

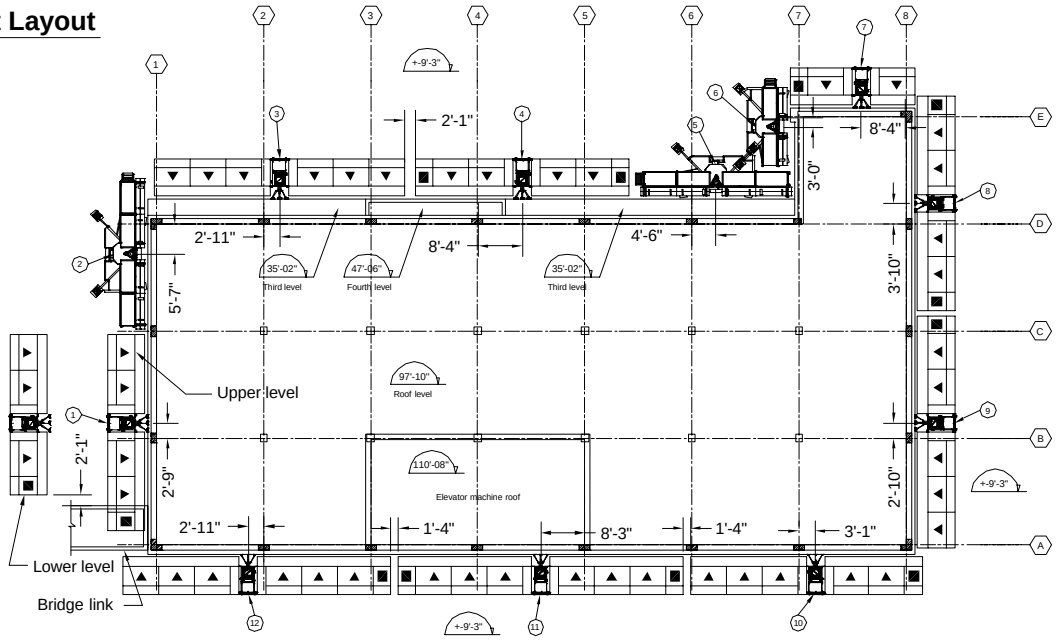


Figure B.5
Project Layout

Locating the Site and Taking Measurements (continued)

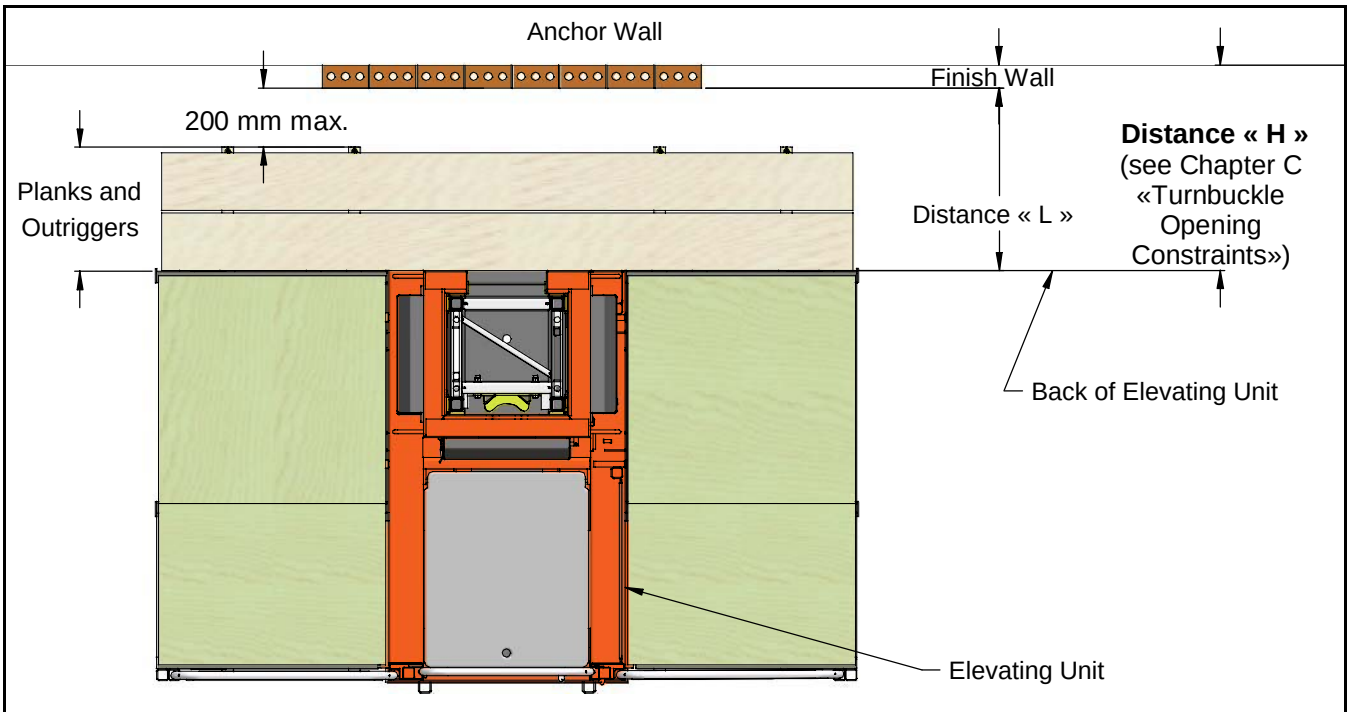


Figure B.6
Distance « L » with Ground Base

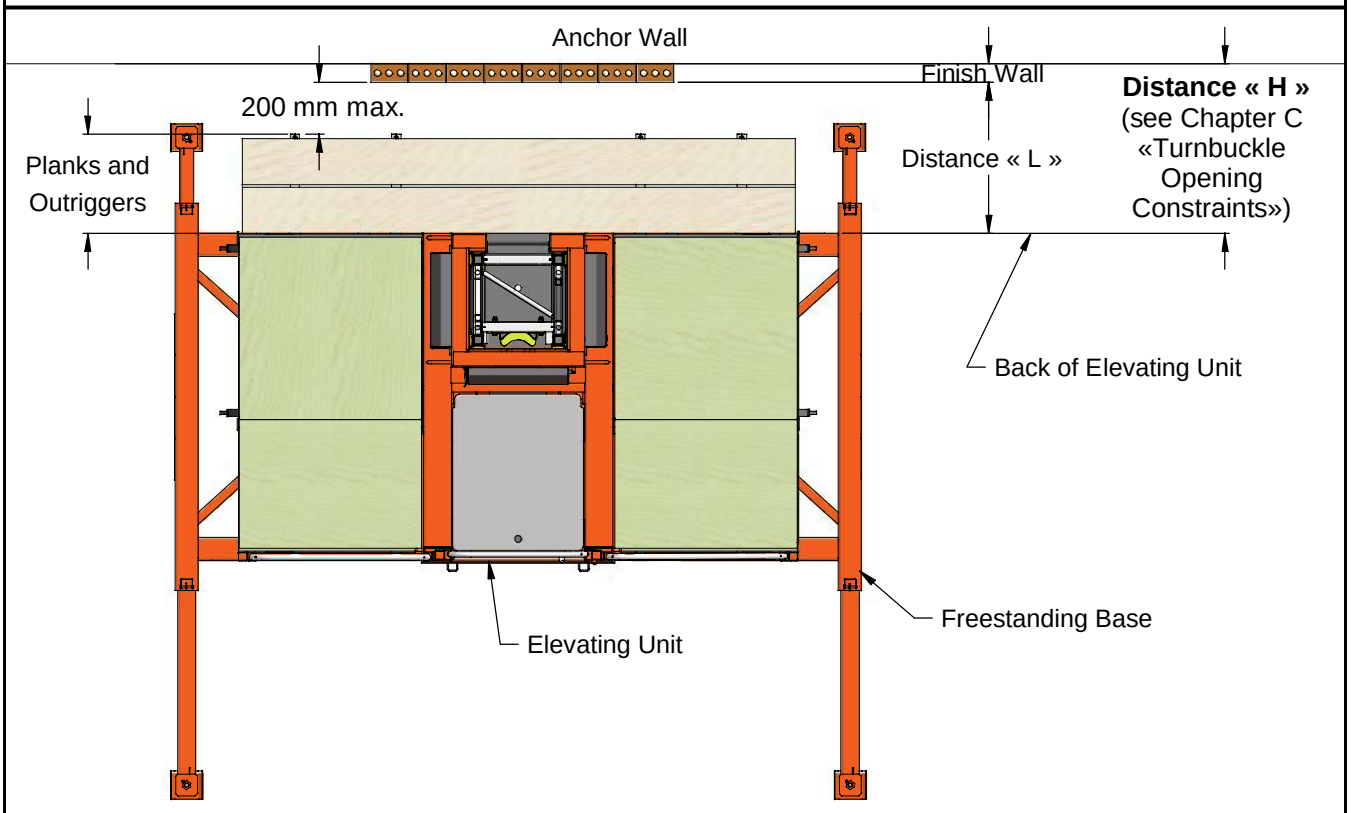


Figure B.7
Distance « L » with Freestanding Base

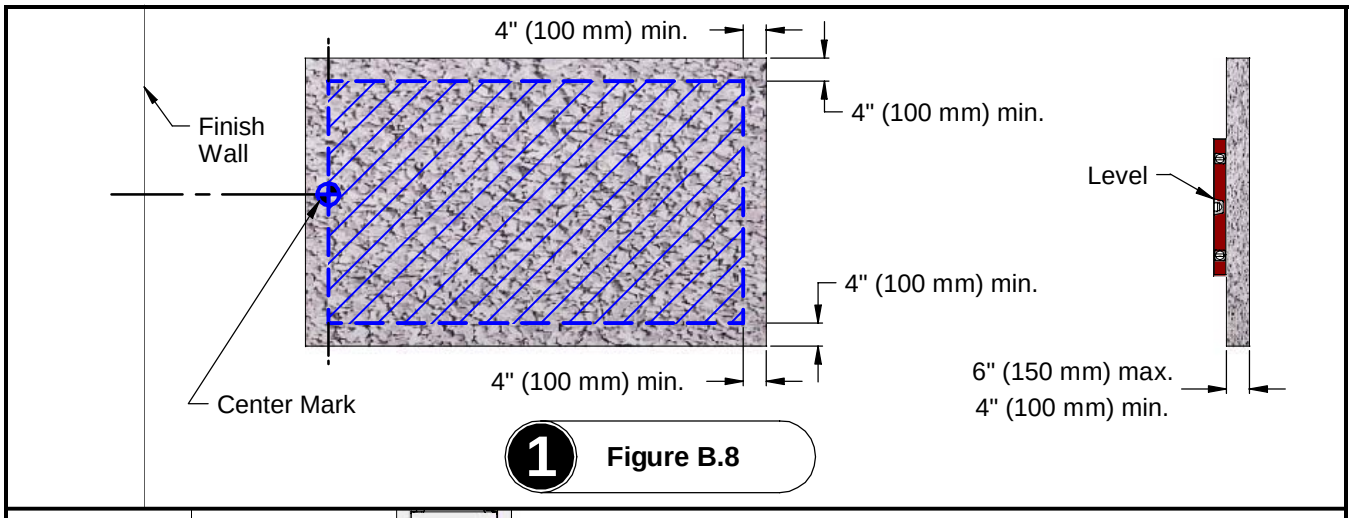
INSTALLATION WITH GROUND BASE

Step 1 (see Figure B.8)

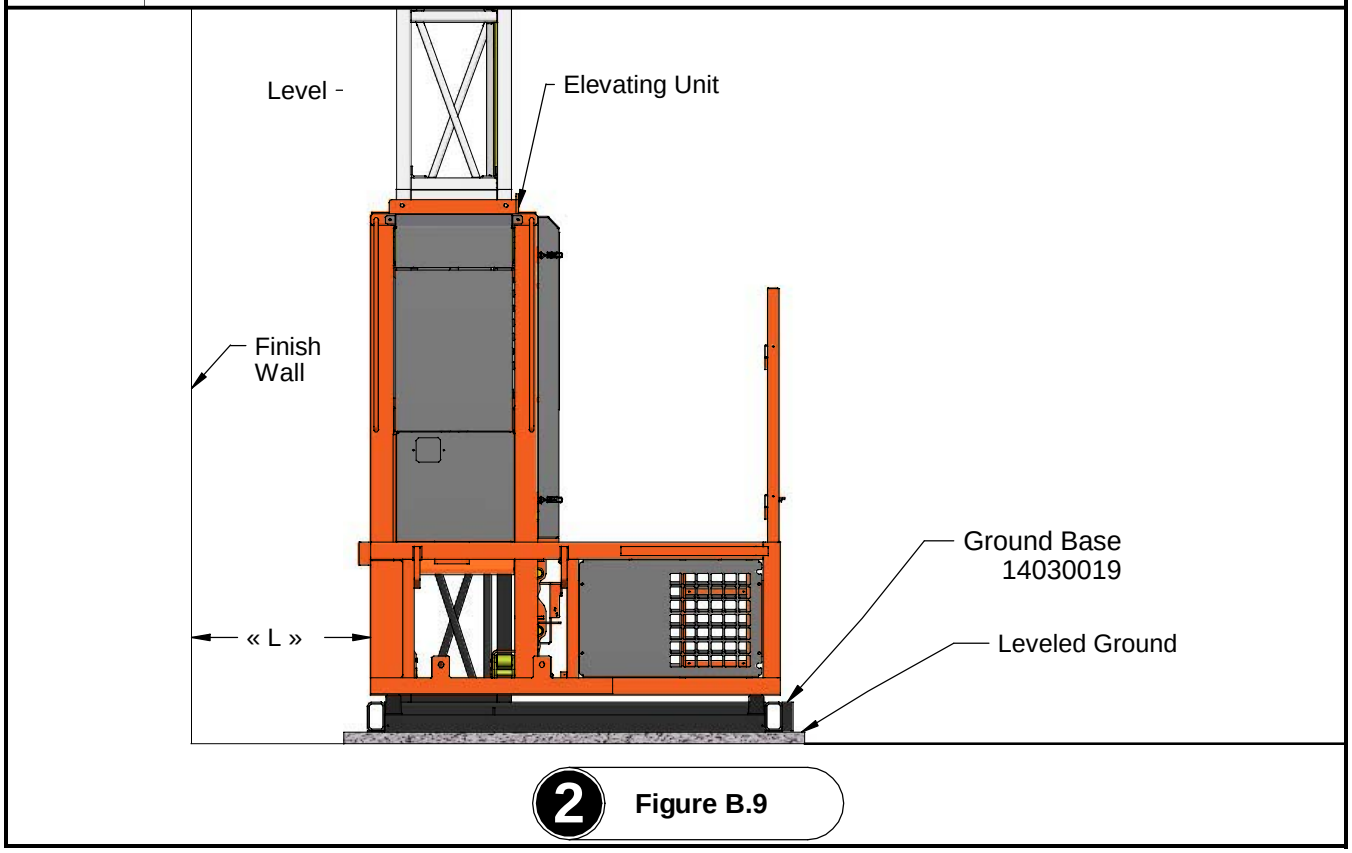
1- Level the ground in area where the base will be positioned with 4” to 6” (100 mm to 150 mm) of crushed stone. A minimum of 4” (100 mm) of material has to exceed the base of the platform and this on all sides of the base.
2- Verify the levelling of ground with a level.

Step 2 (see Figure B.6 and B.9)

3- Measure with precision the distance « L » between elevating unit and finished wall. (see Figure B-7)
4- Position the unit perpendicularly to wall with a lifting device.
5- Verify the perpendicular and levelling of elevating unit, make sure it is perfectly straight to wall. (see Chapter C – page C-5)



1 **Figure B.8**



2 **Figure B.9**

INSTALLATION WITH FREESTANDING BASE (CONTINUED)

Step 1 (see Figure B10)

- Pull the base's front and back stabilizers as far as they will go and lower them onto the wood pads.

Step 2 (see Figure B.7 and B.11)

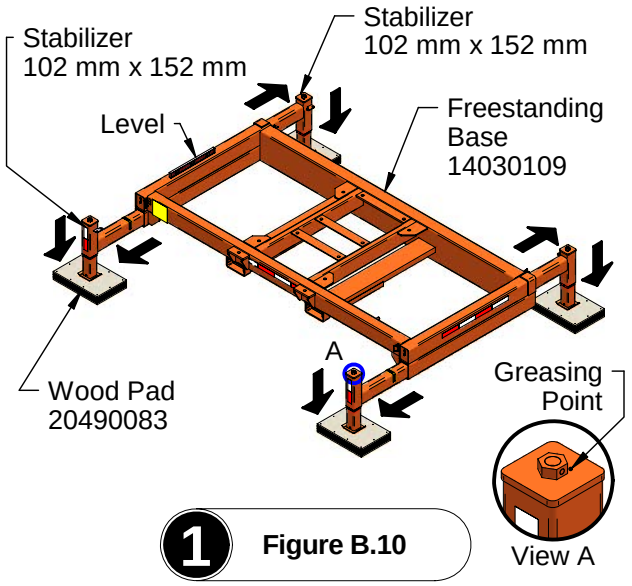
- Carefully measure the distance «L» between the unit and the finished wall, taking into account all obstacles that the platform will have to clear. (see page B-5 and B-8).
- Ensure that the mast is completely vertical, the base is stable and the stabilizers are positioned on the center of the wood pads.
- Do not use the bubble level against the elevating unit; use it against the mast section or the freestanding base.

Step 3 (see Figure B.12)

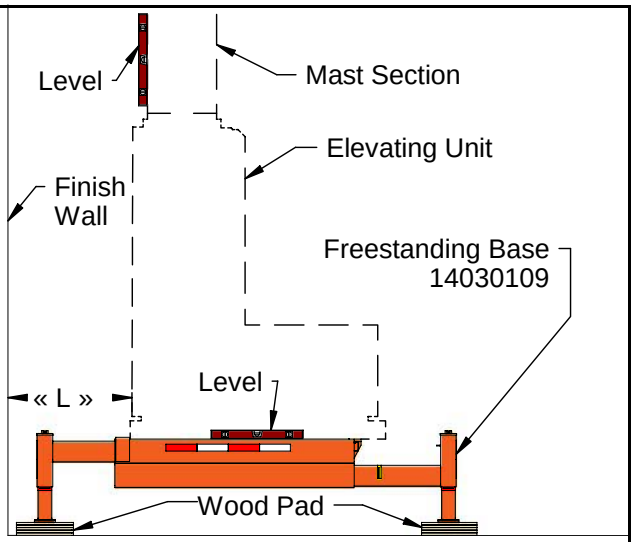
- To level the freestanding base, use the (6) six sided key.
- Follow the instructions on the sticker.

Step 4 (see Figure B.13)

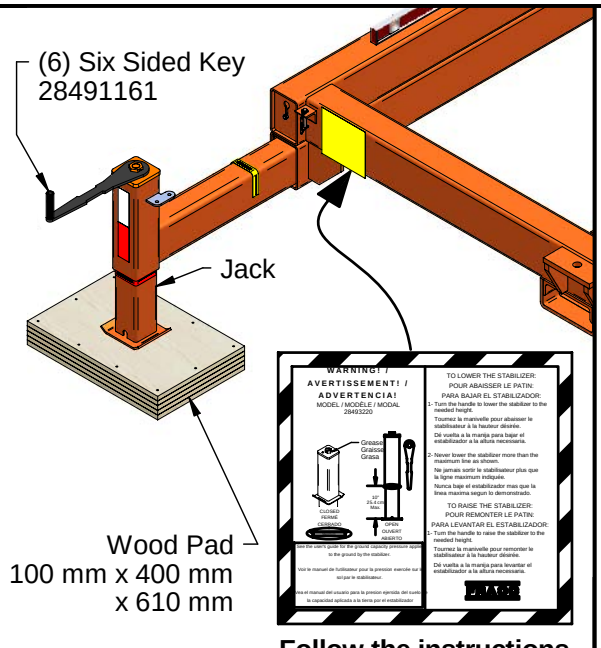
- Bolt the ground base with the elevating unit on the freestanding base using (4) four bolts (BOA-2072).
- Bolt one mast section on the last mast section.
- Raise the elevating unit around 460 mm.
- Tighten the bolt on the ground base with an impact wrench.
- Lower the elevating unit.
- Keep leveling the mast section using a bubble level.



1 **Figure B.10**

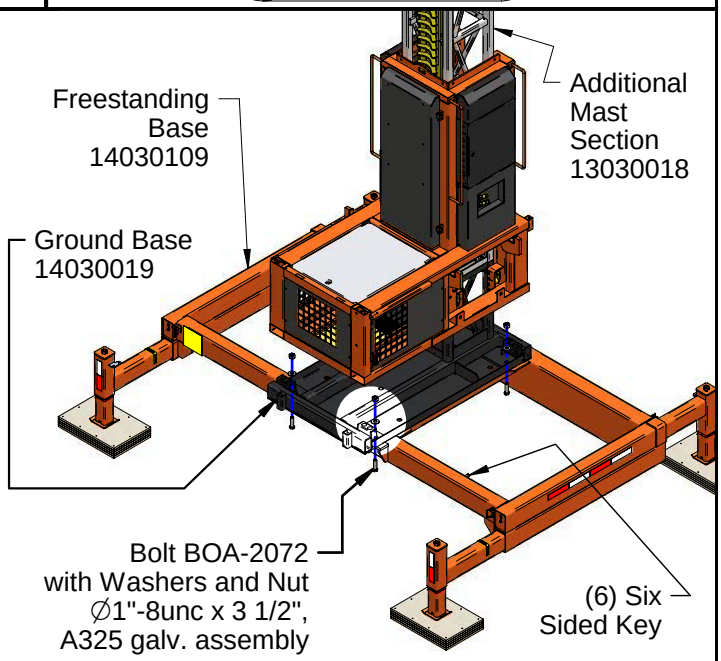


2 **Figure B.11**



Follow the instructions

3 **Figure B.12**



4 **Figure B.13**

Important (see Figure B.14)

- If you must exceed the maximum freestanding height of 13.7 m, be sure to use anchorings device.
- Should never use a crane, monorail, interior working, overhead protection, or winter enclosure when you use a platform with no anchoring device and you need to install the above accessories after the final installation of the platform.
- For heights exceeding 30,5 m, you must install wood pads under the mast and close the four stabilizers completely as illustrated in Figure B.14.

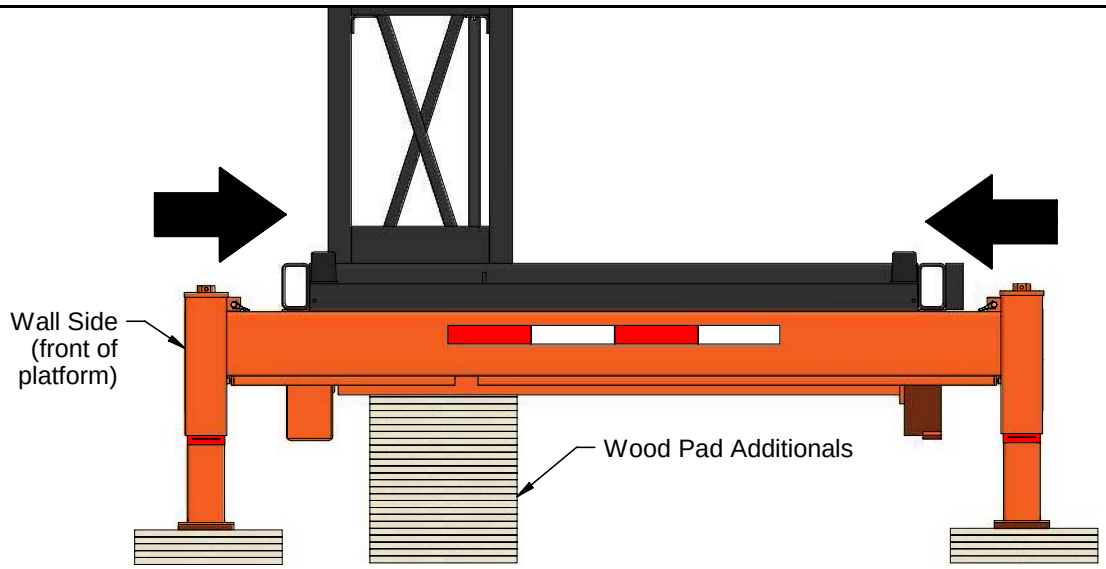


Figure B.14
Wood Pad Additionals

Step 3 (see Figure B.15)

- Insert the (3) three steps stair into the ground base pockets.

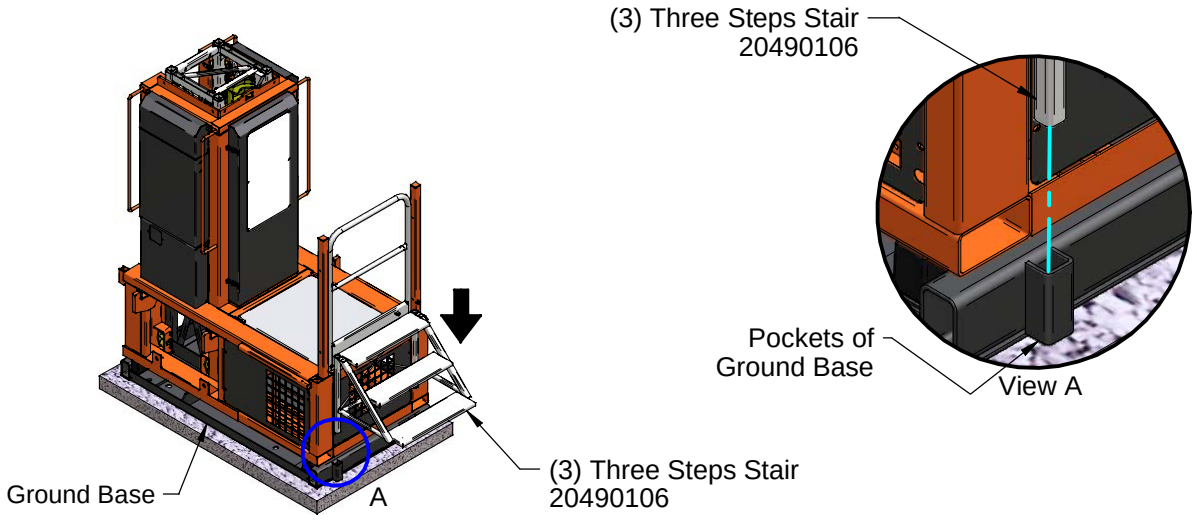


Figure B.15

INSTALLATION WITH FREESTANDING BASE (CONTINUED)

Step1 (see Figure B.16)

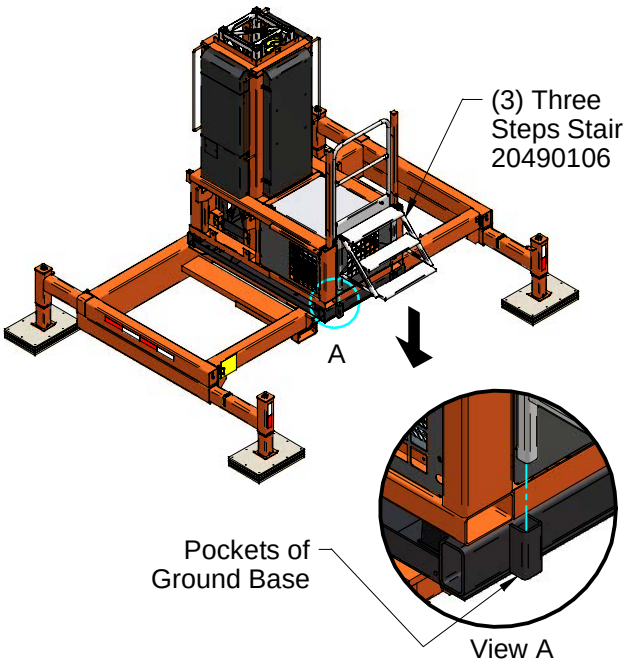
- Insert the (3) three steps stair into the pockets of the ground base.

Step 2 (see Figure B.17)

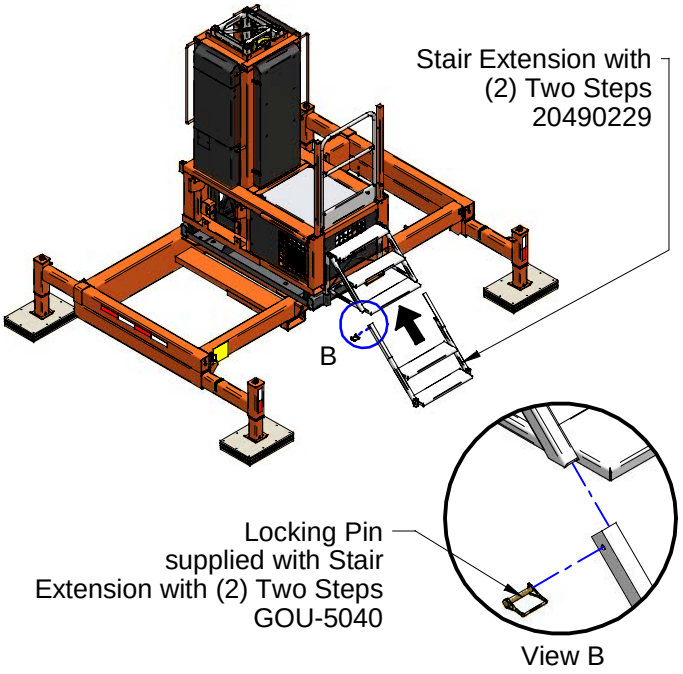
- Fix the stair extension with (2) two steps using the locking pins.

Step 3 (see Figure B.18)

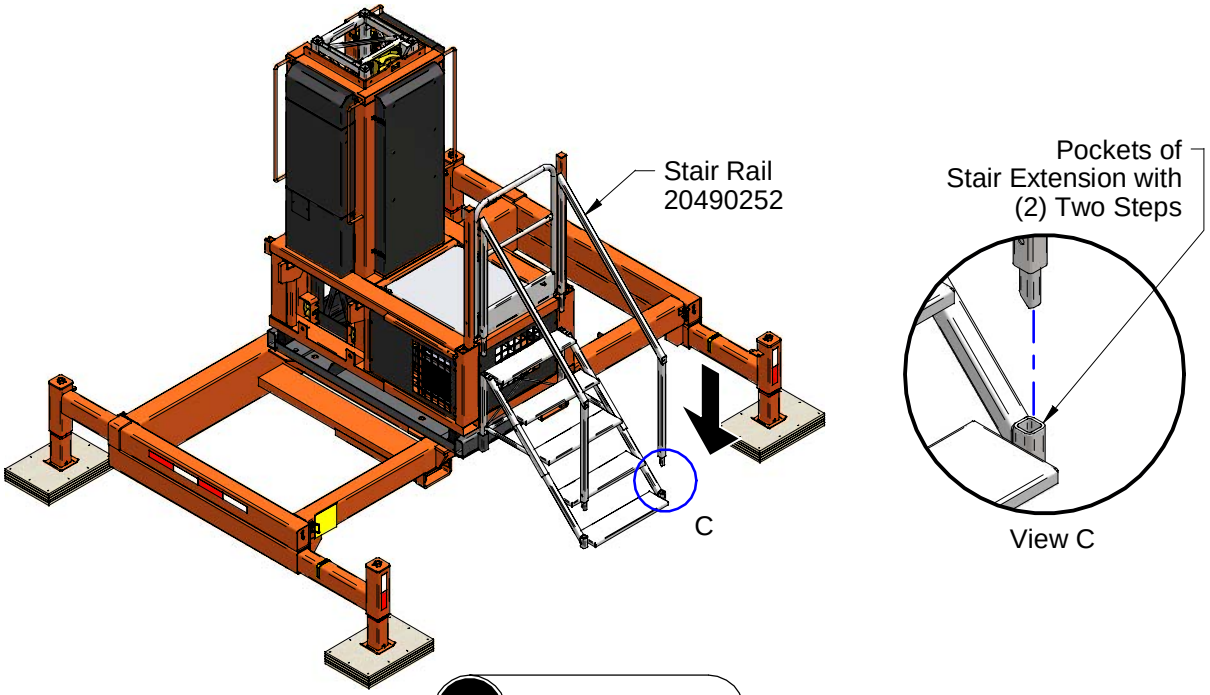
- Insert the stair rail into the stair pockets.



1 **Figure B.16**



2 **Figure B.17**



3 **Figure B.18**

Step 5b (see Figure B.19)

- Insert the (5) five steps stair into the pockets of the ground base.
- Insert the handrail into the pockets of the (5) five steps stair.

Step 6b (see Figure B.20)

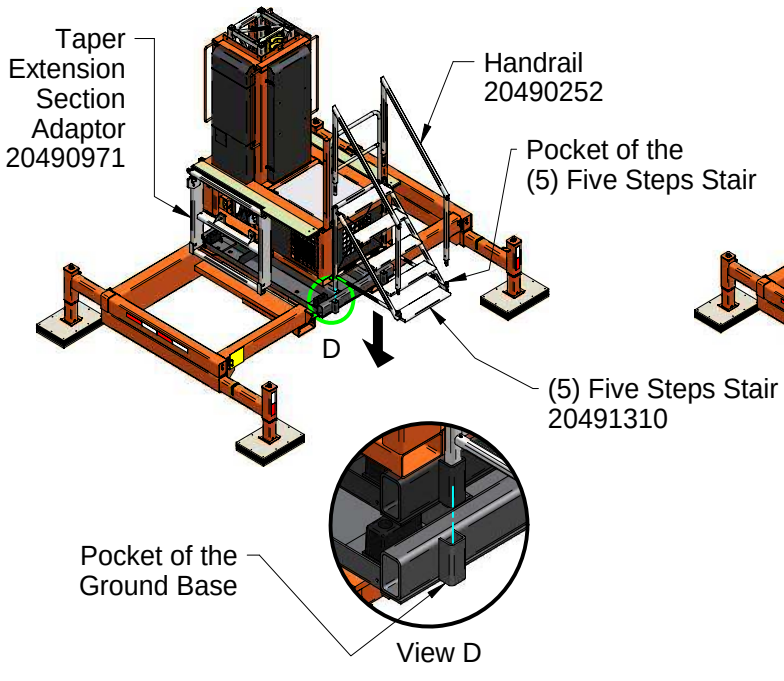
- Fix the stair extension with (2) two steps using the locking pins.

Step 7b (see Figure B.21)

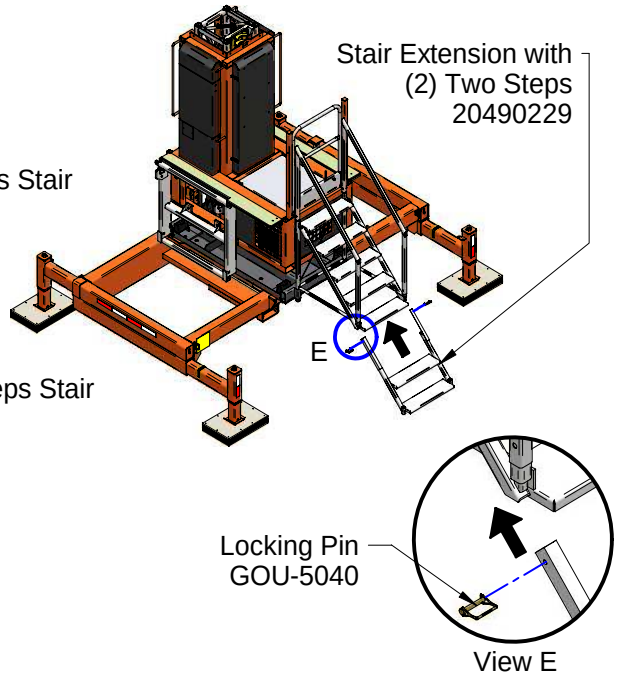
- Install the handrail extension into the pockets of the stair extension with (2) two steps.
- Install the ground foot support under the stair extension with (2) two steps with the help of the locking pins.

Important

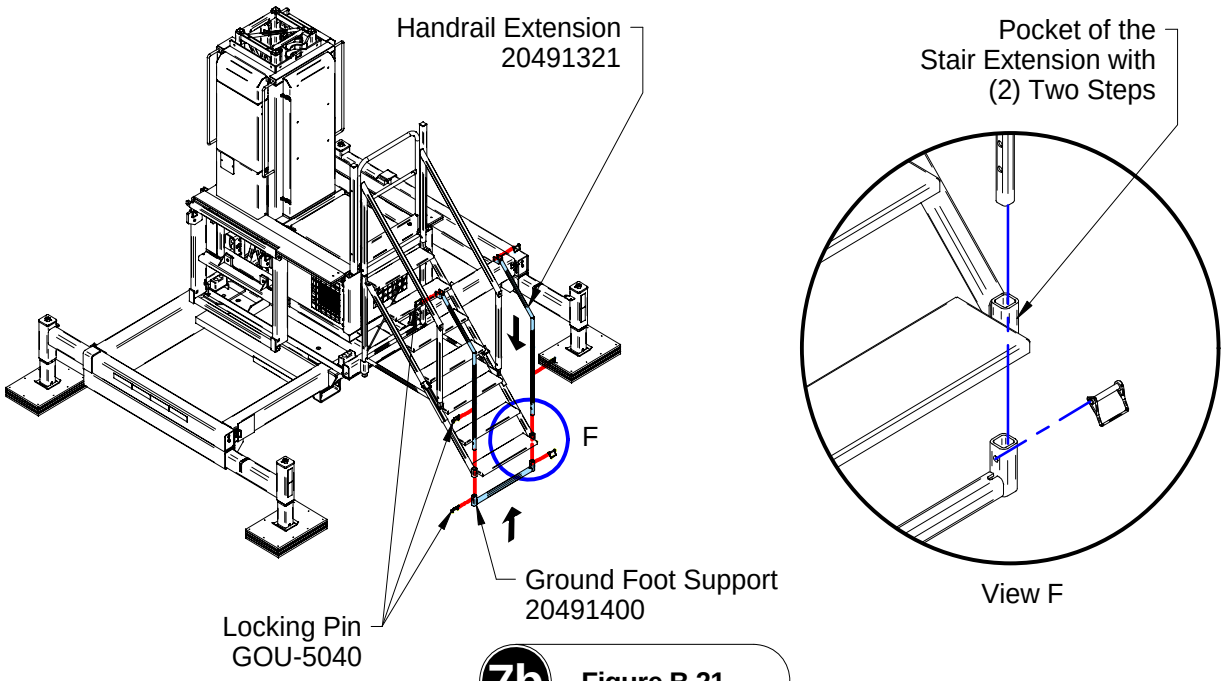
Use the (5) five steps stair when using the taper extension section adaptors.



5b **Figure B.19**



6b **Figure B.20**



7b **Figure B.21**

Wire Mesh Protection

Wire Mesh Protection (see Figure B.22)

-Position and bolt the structure of wire mesh protection on the top of the elevating unit with the help of (4) four bolts (BOA-2031).

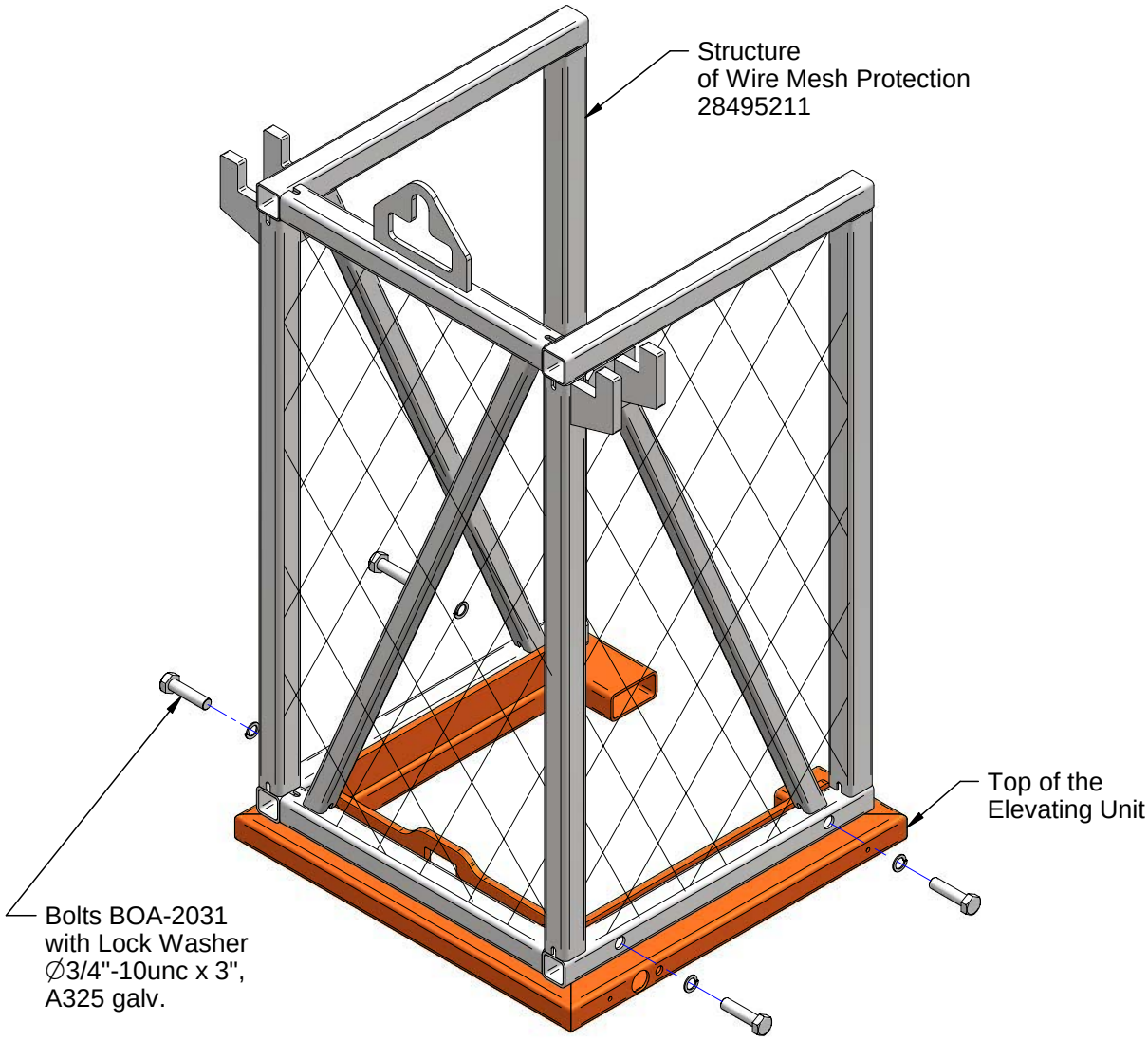
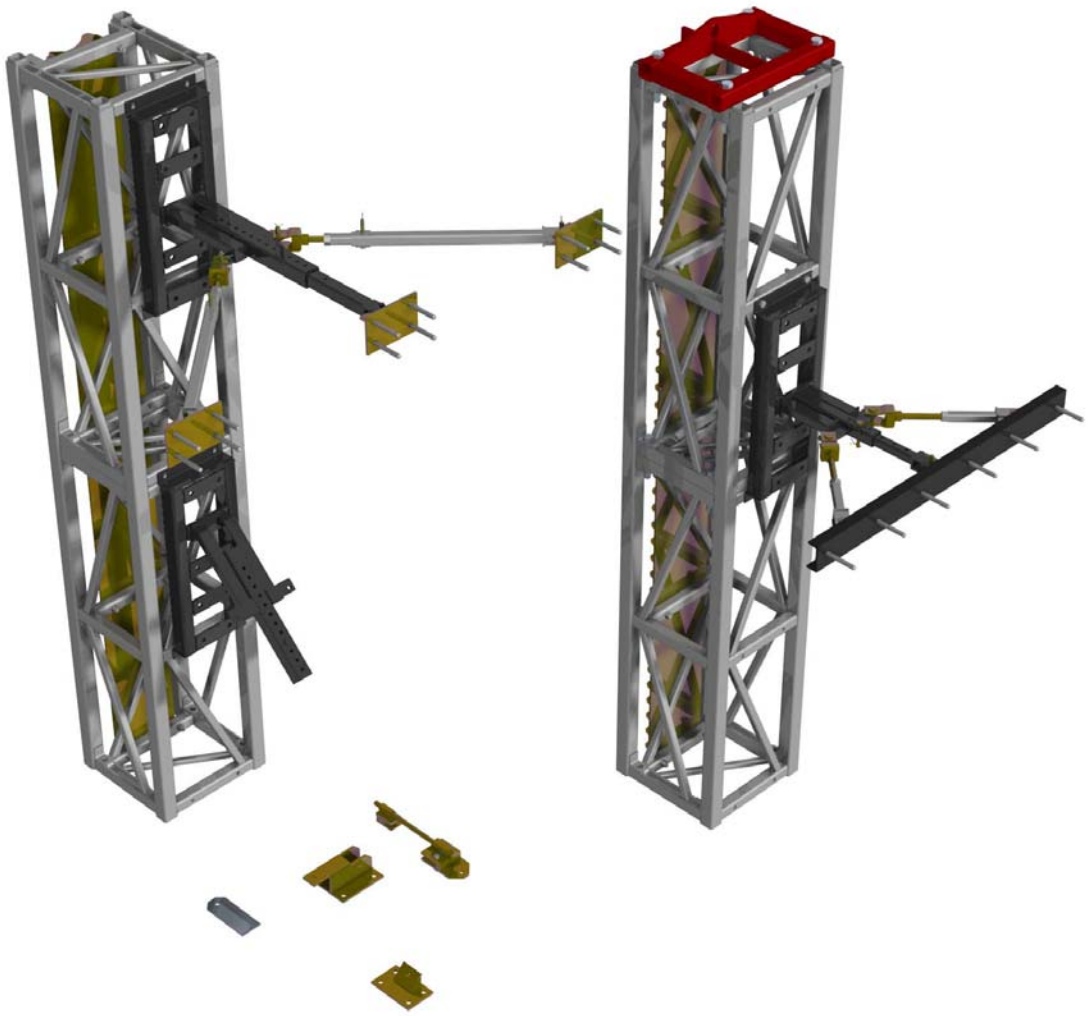


Figure B.22
Wire Mesh Protection



CHAPTER C

MAST AND ANCHORING DEVICES

- Data Sheet for Mast Sections C-2
- Installing Mast Section and Mast End Section C-3
- Anchoring Device Specifications C-4
- Leveling Mast with Anchoring Devices C-5
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- Installation of Bolted Anchors C-18
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- Installation of H-Beam Clamp Anchors C-22
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- Installing Self-Erecting System (optional) C-30
- Installing End of Range Detectors C-32

DATA SHEET OF MAST SECTION

Mast Section with Rung (13030041)	Imperial	Metric
Weight	342 lb	155 kg
Length (see Figure C.1)	20”	508 mm
Width (see Figure C.1)	20”	508 mm
Height (see Figure C.1)	5’-0”	1,5 m
Tightening Torque	265 lb * ft	360 n * m
Maximum Lifting Capacity (see Figure C.2)	6 500 lb	2 950 kg

Note :

* The maximum work height which a mast can reach on a freestanding base is 45’-0” (13,7 m).
* Use a telescopic fork lift, a crane or the self-erecting device to install the mast.
* Be careful of the orientation of the mast section. Place all rungs on the same side.

Do not exceed the following verticality tolerance :

* 1/2” (13 mm) for a 10’-0” (3 m) mast.
* 3/4” (19 mm) for a 20’-0” (6,1 m) mast.
* 1” (25 mm) for the mast’s maximum.

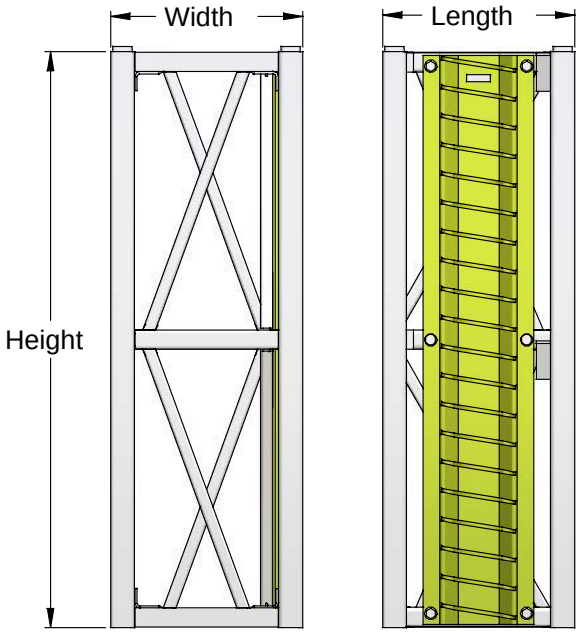


Figure C.1
Mast Section

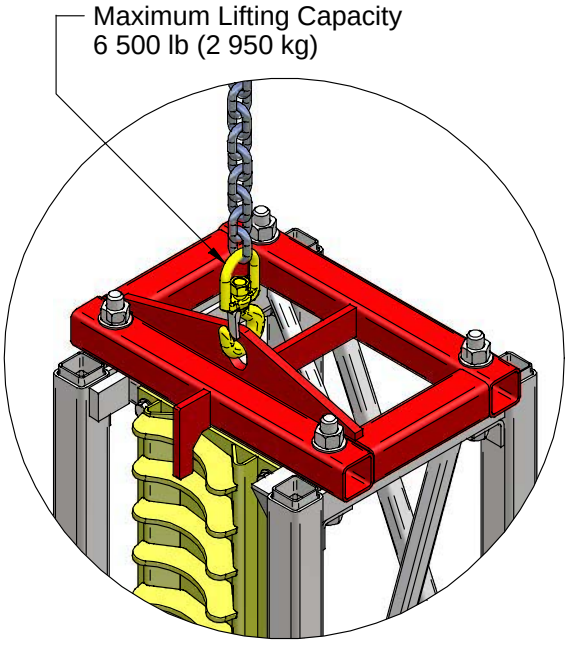


Figure C.2
Lifting Capacity (End Mast Section)

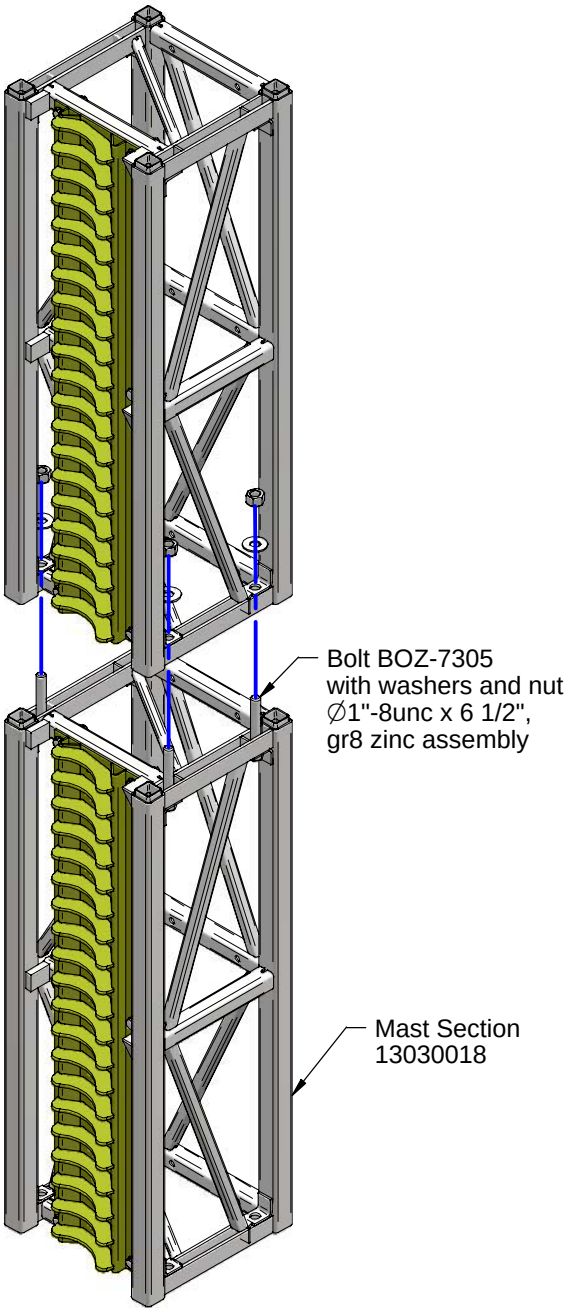
INSTALLATION OF MAST SECTION AND END MAST SECTION

Step 1 (see Figure C.3)

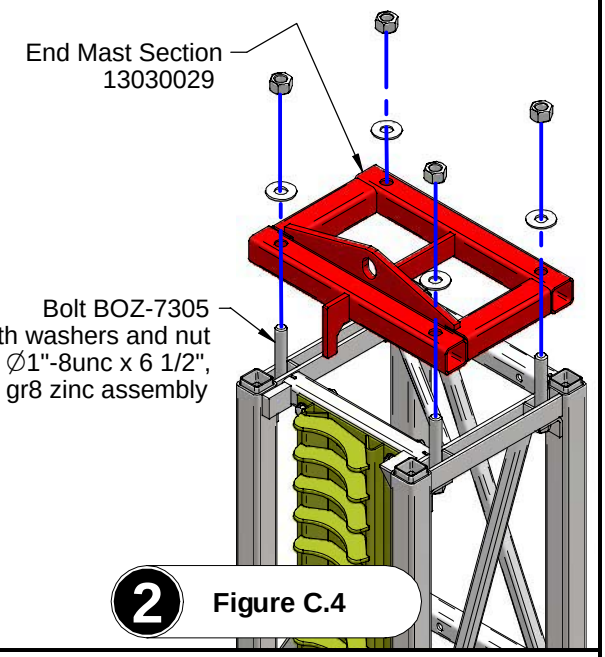
1- Join the male and female sections.
2- Fix the mast sections with four (4) bolts BOZ-7305. Bolt underneath and nut on top.
3- Secure with an impact wrench.

Step 2 (see Figure C.4)

4- Once the last mast section is installed, bolt end mast section with four (4) bolts BOZ-7305.
5- Secure with an impact wrench. Bolt underneath and nut on top.



1 **Figure C.3**



2 **Figure C.4**

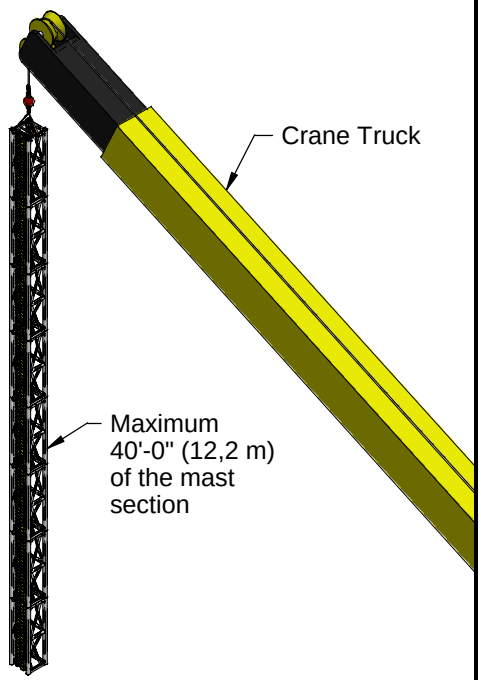


Figure C.5
40'-0" (12,2 m)of the mast section

MAST AND ANCHORING

ANCHORING DEVICE SPECIFICATIONS

Forces applied per plate			
	Force	**Standard Installation**	**Installation with Crane / Shelter**
A	Shear	2 500 lb (1 135 kg)	2 500 lb (1 135 kg)
B	Tension / Compression / Shear	4 500 lb (2 045 kg)	4 500 lb (2 045 kg)
C	Tension / Compression / Shear	4 500 lb (2 045 kg)	5 500 lb (2 500 kg)

Note :

* The real reactions are calculated with the specification of a standard anchoring device. (UNFACTORED)
* In « Out of Service » condition, lower the platform to ground level.
* **A local engineer must give a written approval for the load applied on the building.**
* Only one turnbuckle is working at a time.

Specifications :

* Distance between each anchoring device = 30'-0" (9,1 m).
* The platform must never go over the last anchor except during installation and dismantling procedures.
* Maximum wind condition while in service = 34 mph (55 km / h).
* Maximum wind condition while not in service = 100 mph (165 km/h).
* The minimal penetration in the concrete slab depends of the type of anchoring device and anchors being used. For more details, refer to the engineering drawing specific to every installation.

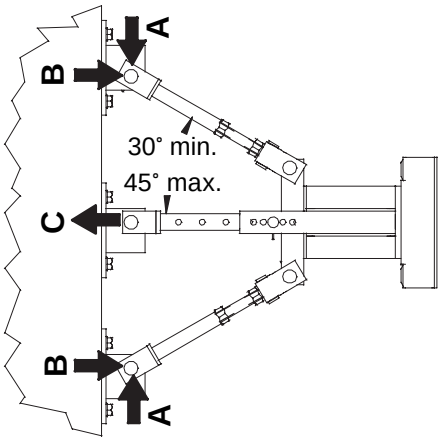


Figure C.6
Three (3) pointanchoring device on the face of the slab

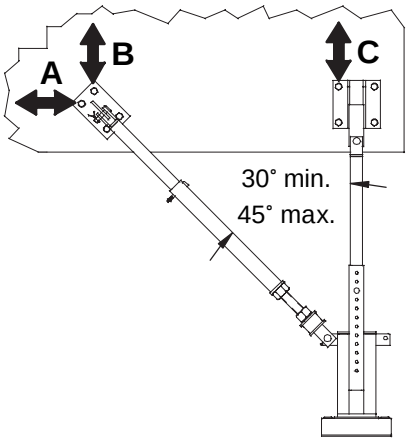


Figure C.7
Two (2) point anchoring device on the face of the slab

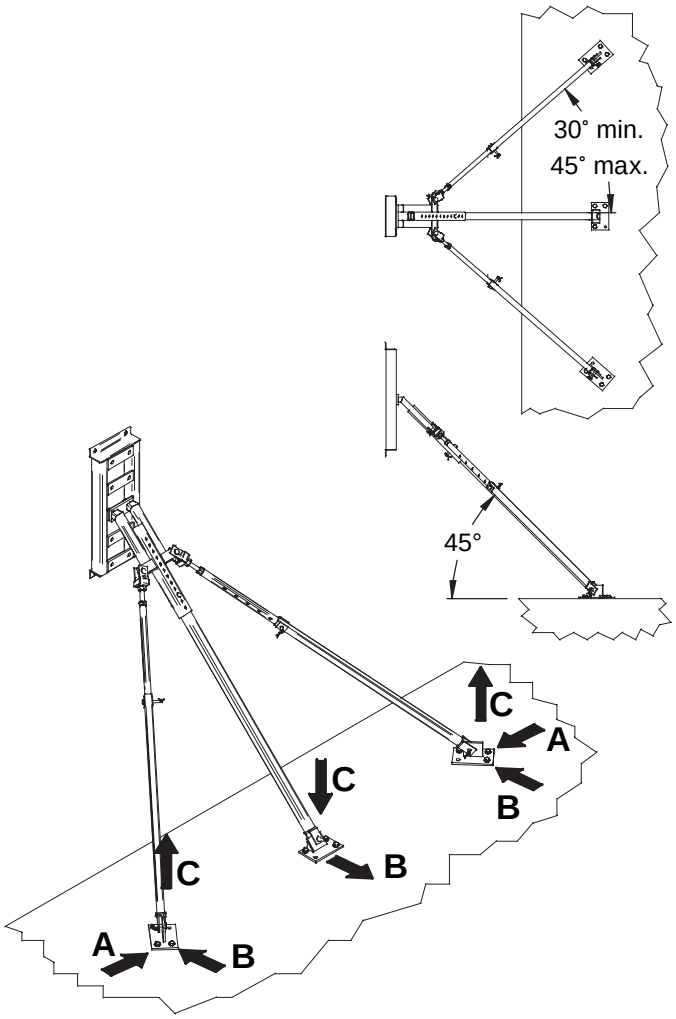
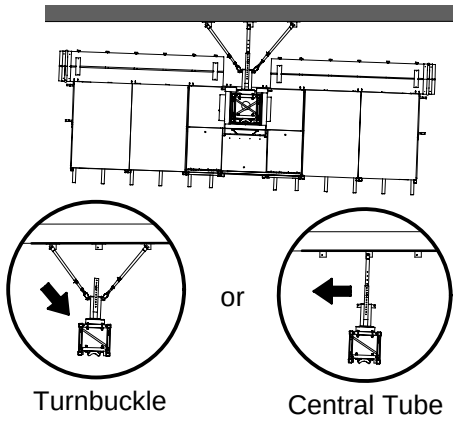


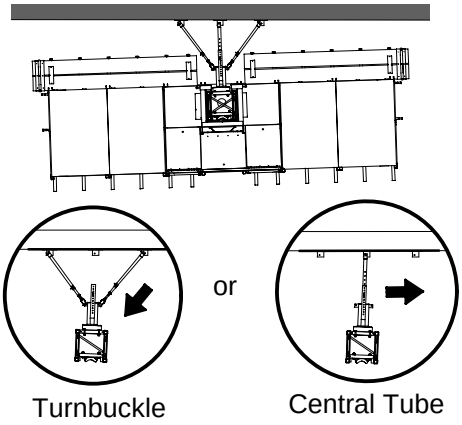
Figure C.8
Three (3) pointanchoring device in angle on the slab

LEVELING OF MAST WITH ANCHORING DEVICES

Type N° 1 : Adjustement of the distance between the wall and the platform.

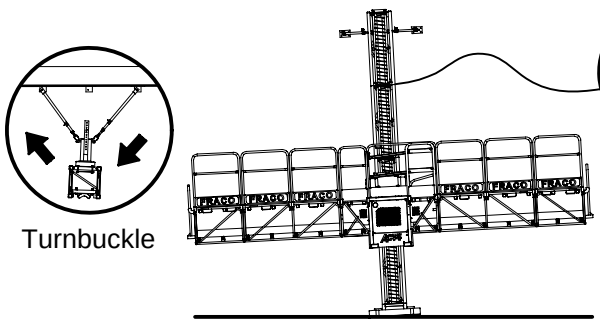


A **Figure C.9**

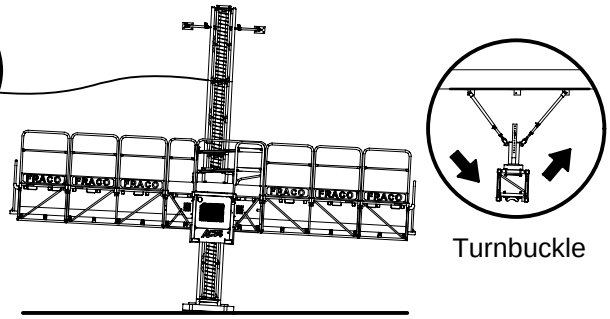


B **Figure C.10**

Type N° 2 : Leveling of the mast from left to right.

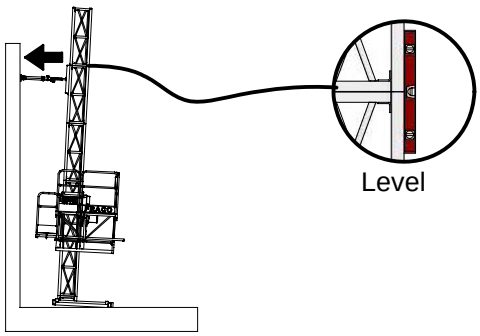


C **Figure C.11**

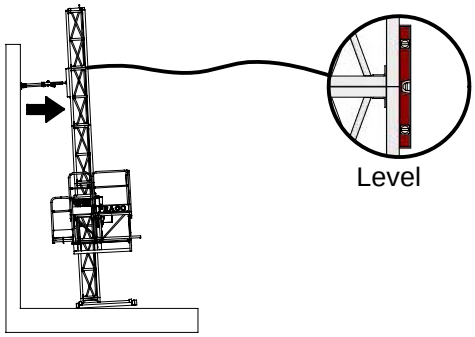


D **Figure C.12**

Type N° 3 : Leveling of the mast front and back.



E **Figure C.13**



F **Figure C.14**

Situations

A- Move the central tube towards the left or push with the left turnbuckle before installation of the central tube (see Figure C.9).
B- Move the central tube towards the right or push with the left turnbuckle before installation of the central tube (see Figure C.10).
C- Shorten the right turnbuckle and lengthen the left turnbuckle (see Figure C.11).
D- Shorten the left turnbuckle and lengthen the right turnbuckle (see Figure C.12).
E- Lengthen both turnbuckles and the central tube. Push with the help of the turnbuckles (see Figure C.13).
F- Shorten both turnbuckles and the central tube. Pull with the help of the turnbuckles (see Figure C.14).

DATA SHEET OF ANCHORING DEVICES

Wall Tie Adaptor (20490016)	**Imperial**	**Metric**
Weight (only wall tie adaptor)	44 lb	20 kg
Depth	3 3/16”	81 mm
Wall Tie (2'-3") (21490017)	**Imperial**	**Metric**
Weight (only wall tie)	21.2 lb	9.6 kg
Maximum Length (wall tie + central tube max. + width of wall tie adaptor)	12’-2 5/8”	3,7 m
Wall Tie (16") (21490028)	**Imperial**	**Metric**
Weight (only wall tie)	14.1 lb	6.4 kg
Maximum Length (wall tie + central tube max. + width of wall tie adaptor)	3’-2 3/4”	1,0 m
Angle Wall Tie (21490051)	**Imperial**	**Metric**
Weight (only wall tie)	21.6 lb	9.8 kg
Maximum Length (wall tie + central tube max. + width of wall tie adaptor)	11’-8 1/4” + 5 1/8”	3,56 m + 129 mm

Important : the minimum that you see in Figure C.16 to C.22 is calculated with an shorter central tube.

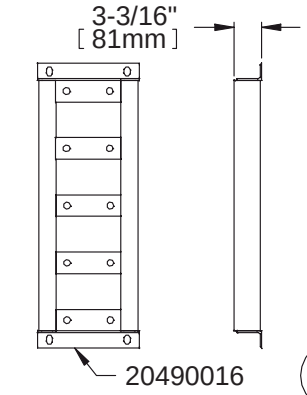


Figure C.16
Wall Tie Adaptor

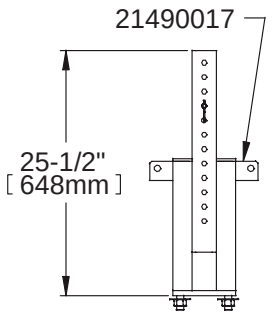


Figure C.17
Wall Tie 2'-3" (686 mm)

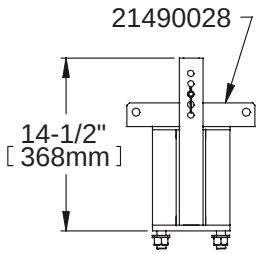


Figure C.18
Wall Tie 16" (406 mm)

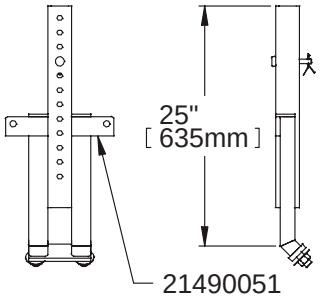


Figure C.19
Angle Wall Tie

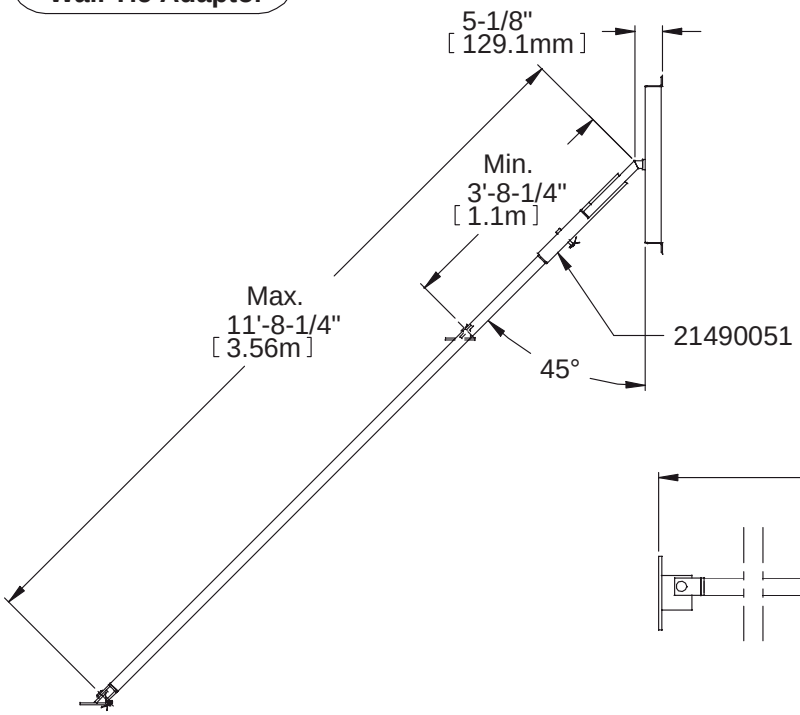


Figure C.20
Angle Length Dimensions

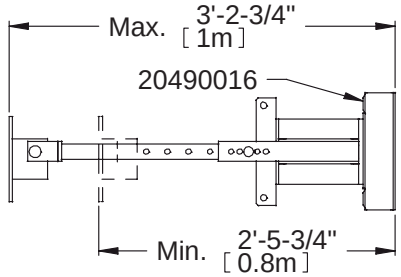


Figure C.21
Short Length Dimensions

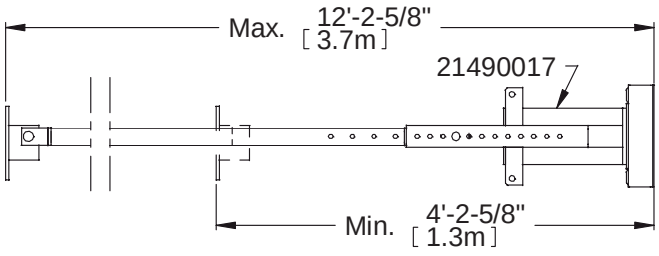


Figure C.22
Long Length Dimensions

Central Tube 2” x 2” x 2’-0” (51 mm x 51 mm x 610 mm) (22010027)	**Imperial**	**Metric**
Weight	9.9 lb	4.5 kg
Length (max. / min. adjustment)	20 5/8” / 10 5/8”	524 mm / 270 mm
Central Tube 2” x 2” x 3’-0” (51 mm x 51 mm x 914 mm) (22010049)	**Imperial**	**Metric**
Weight	13.4 lb	6.1 kg
Length (max. / min. adjustment)	2’-8 5/8” / 1’-10 5/8”	828 mm / 575 mm
Central Tube 2” x 2” x 4’-0” (51 mm x 51 mm x 1,2 m) (22010050)	**Imperial**	**Metric**
Weight	18.7 lb	8.5 kg
Length (max. / min. adjustment)	3’-8 5/8” / 2’-10 5/8”	1,1 m / 880 mm
Central Tube 2” x 2” x 5’-0” (51 mm x 51 mm x 1,5 m) (22010061)	**Imperial**	**Metric**
Weight	22.7 lb	10.3 kg
Length (max. / min. adjustment)	4’-8 5/8” / 3’-10 5/8”	1,4 m / 1,2 m
Central Tube 2” x 2” x 6’-0” (51 mm x 51 mm x 1,8 m) (22010072)	**Imperial**	**Metric**
Weight	27.4 lb	12.4 kg
Length (max. / min. adjustment)	5’-8 5/8” / 4’-10 5/8”	1,7 m / 1,5 m
Central Tube 2” x 2” x 7’-0” (51 mm x 51 mm x 2,1 m) (22010083)	**Imperial**	**Metric**
Weight	31.67 lb	14.4 kg
Length (max. / min. adjustment)	6’-8 5/8” / 5’-10 5/8”	2,0 m / 1,8 m
Central Tube 2” x 2” x 8’-0” (51 mm x 51 mm x 2,4 m) (22010106)	**Imperial**	**Metric**
Weight	41.8 lb	19 kg
Length (max. / min. adjustment)	7’-8 5/8” / 6’-10 5/8”	2,4 m / 2,1 m
Central Tube 2” x 2” x 9’-0” (51 mm x 51 mm x 2,7 m) (22010162)	**Imperial**	**Metric**
Weight	38.25 lb	17.3 kg
Length (max. / min. adjustment)	8’-8 5/8” / 7’-10 5/8”	2,7 m / 2,4 m
Central Tube 2” x 2” x 10’-0” (51 mm x 51 mm x 3,0 m) (22010184)	**Imperial**	**Metric**
Weight	42.5 lb	19.3 kg
Length (max. / min. adjustment)	9’-8 5/8” / 8’-10 5/8”	3,0 m / 2,7 m
Central Tube 1 1/2” x 1 1/2” x 2’-0” (38 mm x 38 mm x 610 mm) (22020017)	**Imperial**	**Metric**
Weight	7.8 lb	3.5 kg
Length (max. / min. adjustment)	19 5/8” / 11 1/8”	498 mm / 283 mm
Central Tube 1 1/2” x 1 1/2” x 15” (38 mm x 38 mm x 381 mm) (22020028)	**Imperial**	**Metric**
Weight	5.27 lb	2.4 kg
Length (max. / min. adjustment)	10 5/8” / 4 1/4”	270 mm / 108 mm
Central Tube 1 1/2” x 1 1/2” x 6” (38 mm x 38 mm x 152 mm) (22020039)	**Imperial**	**Metric**
Weight	5.6 lb	2.5 kg
Length (max. / min. adjustment)	7 5/8” / 5 1/2”	194 mm / 140 mm

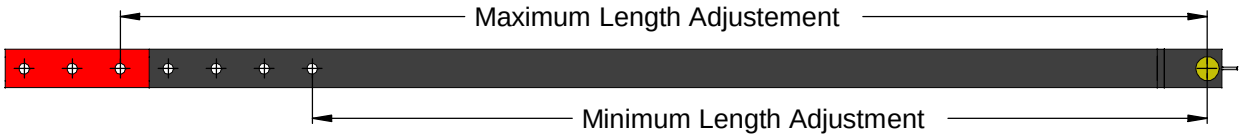


Figure C.23
Central Tube

Turnbuckle with Hand 2'-5" (737 mm) (23020018)	**Imperial**	**Metric**
Weight	5.15 lb	2.35 kg
Turnbuckle with Hand 3'-4" (1,0 m) (23020029)	**Imperial**	**Metric**
Weight	6.85 lb	3.10 kg
Turnbuckle with Hand 4'-4" (1,32 m) (23020030)	**Imperial**	**Metric**
Weight	8.60 lb	3.90 kg
Turnbuckle with Hand 5'-4" (1,63 m) (23020041)	**Imperial**	**Metric**
Weight	10.50 lb	4.75 kg
Turnbuckle with Hand 6'-4" (1,93 m) (23020052)	**Imperial**	**Metric**
Weight	12.25 lb	5.55 kg
Turnbuckle with Hand 7'-4" (2,24 m) (23020063)	**Imperial**	**Metric**
Weight	14.10 lb	6.40 kg
Turnbuckle with Hand 8'-4" (2,54 m) (23020074)	**Imperial**	**Metric**
Weight	15.90 lb	7.25 kg
Turnbuckle with Nut 25 13/16" (605 mm) (23010028) (for turnbuckle reinforced)	**Imperial**	**Metric**
Weight	12.85 lb	5.85 kg
Turnbuckle with Nut 2'-5" (736 mm) (23010017)	**Imperial**	**Metric**
Weight	4.40 lb	2.00 kg
Turnbuckle Hand 8 1/2" (216 mm) (23030019)	**Imperial**	**Metric**
Weight	3.70 lb	1.65 kg
Turnbuckle Hand 16” (406 mm) (23030020)	**Imperial**	**Metric**
Weight	5.00 lb	2.25 kg
Turnbuckle Hand 14 3/16” (360 mm) (23030031) (for turnbuckle reinforced)	**Imperial**	**Metric**
Weight	9.80 lb	4.45 kg
Turnbuckle Hand and Nut 11” (279 mm) (23050011)	**Imperial**	**Metric**
Weight	2.45 lb	1.10 kg
Turnbuckle Hand and Nut 15 1/8” (384 mm) (23050055)	**Imperial**	**Metric**
Weight	3.10 lb	1.40 kg
Turnbuckle Hand and Nut 20 1/2” (521 mm) (23050022)	**Imperial**	**Metric**
Weight	3.75 lb	1.70 kg
Turnbuckle Extension 15 1/8” (384 mm) (23040010)	**Imperial**	**Metric**
Weight	5.10 lb	2.35 kg
Turnbuckle Extension 2’-3” (686 mm) (23040032)	**Imperial**	**Metric**
Weight	7.75 lb	3.55 kg
Turnbuckle Extension 3’-3” (991 mm) (23040021)	**Imperial**	**Metric**
Weight	10.80 lb	4.90 kg

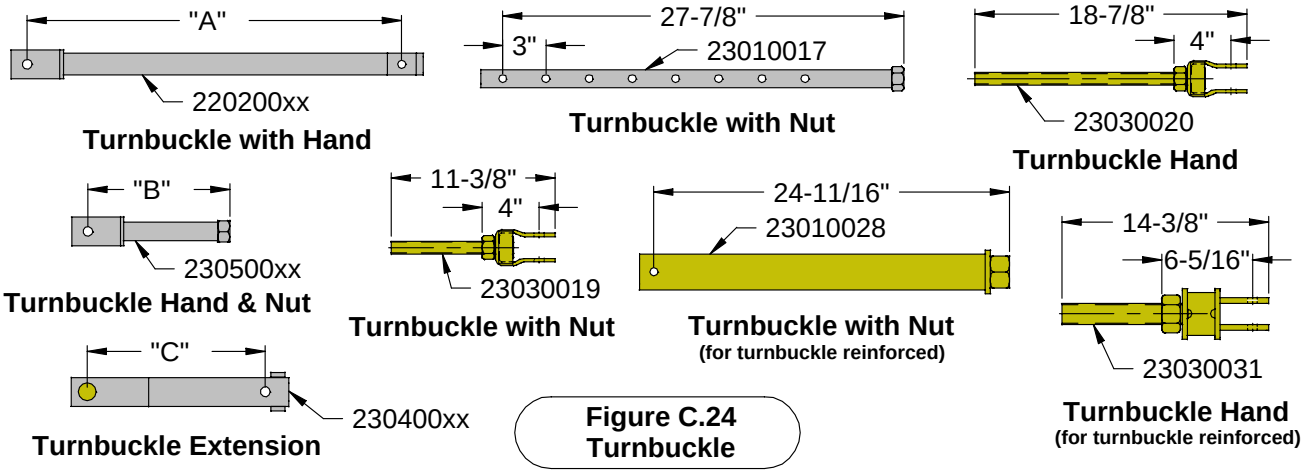


Figure C.24
Turnbuckle

Turnbuckle 12’-0” (3,65 m) Assembly (see Figure C.25)	**Imperial**	**Metric**
Maximum Length Adjustment (calculated with an longer turnbuckle with hand)	11’-9 3/8”	3.59 m
Minimum Length Adjustment (calculated with an longer turnbuckle with hand)	8’-11 7/8”	2.70 m
Turnbuckle 5’-6” (1,68 m) Assembly (see Figure C.25)	**Imperial**	**Metric**
Maximum Length Adjustment (calculated with a shorter turnbuckle with hand)	5’-2 7/8”	1.60 m
Minimum Length Adjustment (calculated with a shorter turnbuckle with hand)	3’-0 7/8”	937 mm
Turnbuckle 12’-0” (3,6 m) Assembly (see Figure C.26) (for turnbuckle reinforced)	**Imperial**	**Metric**
Maximum Length Adjustment (calculated with the 9’-0” (2,7 m) central tube)	11’-8 5/8”	3.60 m
Minimum Length Adjustment (calculated with the 9’-0” (2,7 m) central tube)	10’-5 5/8”	3.20 m
Turnbuckle 5’-0” (1,52 m) Assembly (see Figure C.26) (for turnbuckle reinforced)	**Imperial**	**Metric**
Maximum Length Adjustment (calculated with a shorter central tube)	4’-8 5/8”	1.44 m
Minimum Length Adjustment (calculated with a shorter central tube)	3’-5 5/8”	1.10 m
Turnbuckle 14” (356 mm) Assembly (23070174)	**Imperial**	**Metric**
Maximum Length Adjustment	19”	483 mm
Minimum Length Adjustment	14”	356 mm
Turnbuckle 18” (457 mm) Assembly (23070147)	**Imperial**	**Metric**
Maximum Length Adjustment	23”	584 mm
Minimum Length Adjustment	18”	457 mm
Turnbuckle 2’-0” (610 mm) Assembly (23070125)	**Imperial**	**Metric**
Maximum Length Adjustment	36”	915 mm
Minimum Length Adjustment	23 1/2”	597 mm

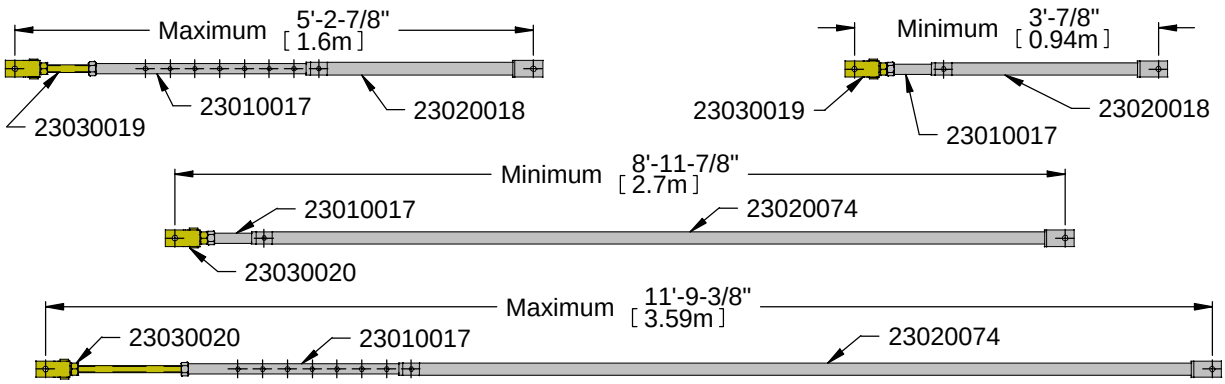


Figure C.25
Length Adjustment of Turnbuckles

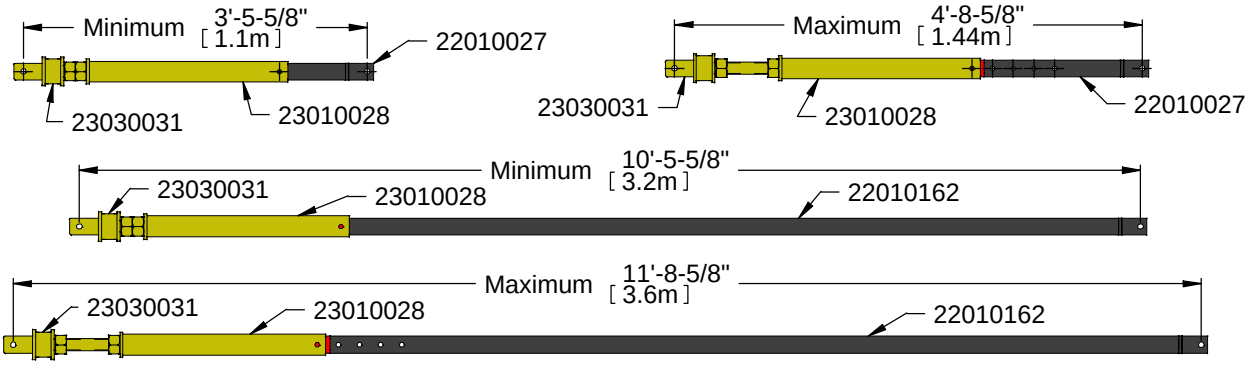


Figure C.26
Length Adjustment of Turnbuckles Reinforced

TURNBUCKLE OPENING CONSTRAINTS

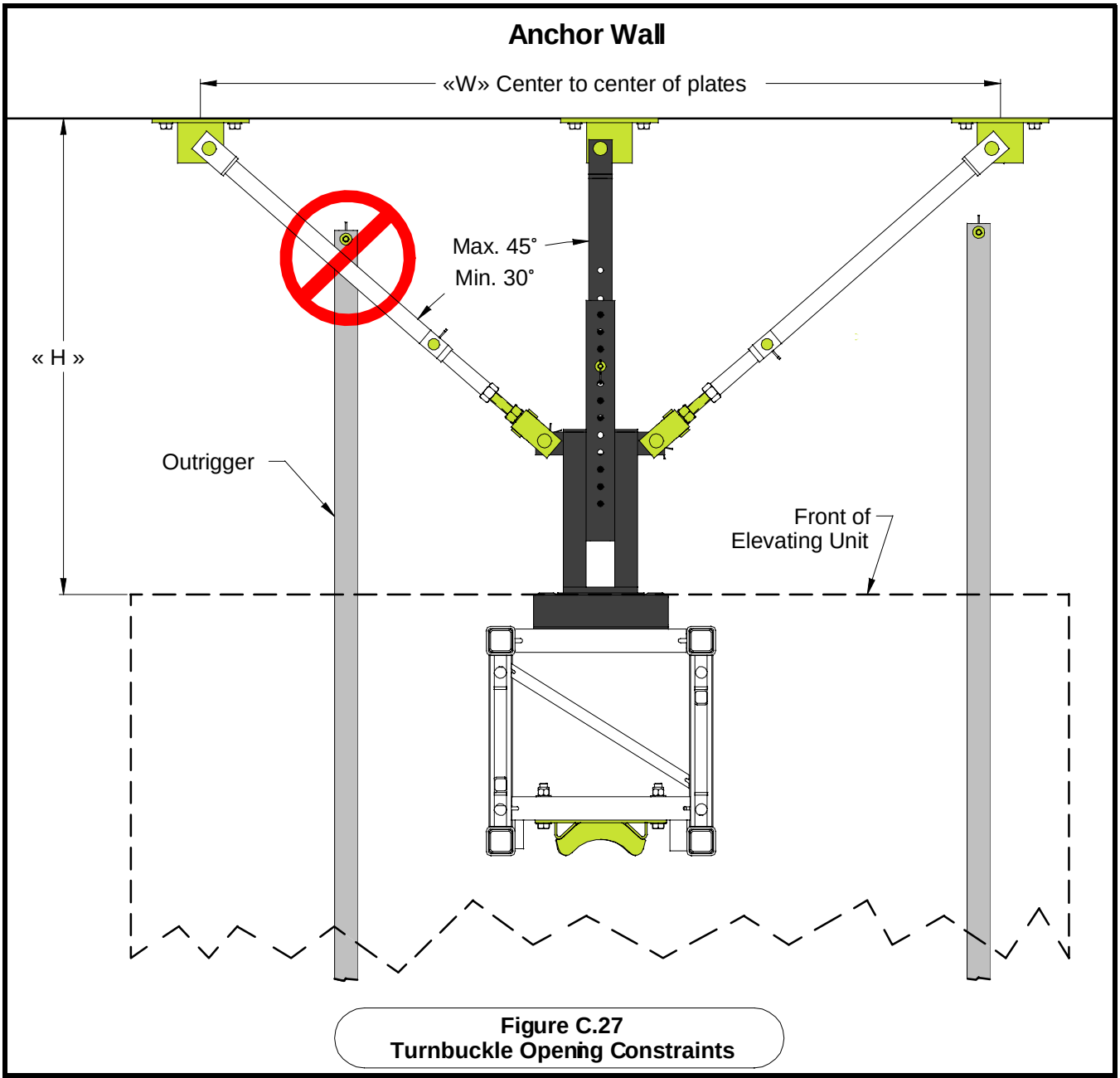


Figure C.27
Turnbuckle Opening Constraints

Distance «H» (between the machine and the anchoring wall)	Minimal Opening «W» at 30°	Maximal Opening «W» at 45°
20 " (500 mm)	22" (559 mm)	30" (762 mm)
2'-4" (710 mm)	28" (711 mm)	40" (1 016 mm)
3'-0" (915 mm)	37" (940 mm)	56" (1 442 mm)
3'-8" (1 120 mm)	46" (1 168 mm)	72" (1 829 mm)
4'-4" (1 320 mm)	55" (1 397 mm)	88" (2 235 mm)
5'-0" (1 525 mm)	65" (1 651 mm)	104" (2 642 mm)
5'-8" (1 725 mm)	74" (1 880 mm)	120" (3 048 mm)

*** For distances « H » greater than 5'-8" (1 725 mm) contact the FRACO engineering department.**
*** Make sure that the turnbuckle don't interfere with the first outrigger used with the planks.**

INSTALLATION OF ANCHORING DEVICES WITH GROUND BASE

* Under no circumstances the platform can be raised and/or loaded with material unless the installation of the two (2) first anchoring devices is complete. This rule applies for installation and dismantling.

* With ground base intallation, If the first anchoring device is higher than 10'-0" (3,0 m), the platform must be secured with a lifting device (crane truck, fork lift, etc...) during the installation or dismantling of the two (2) first anchoring device.

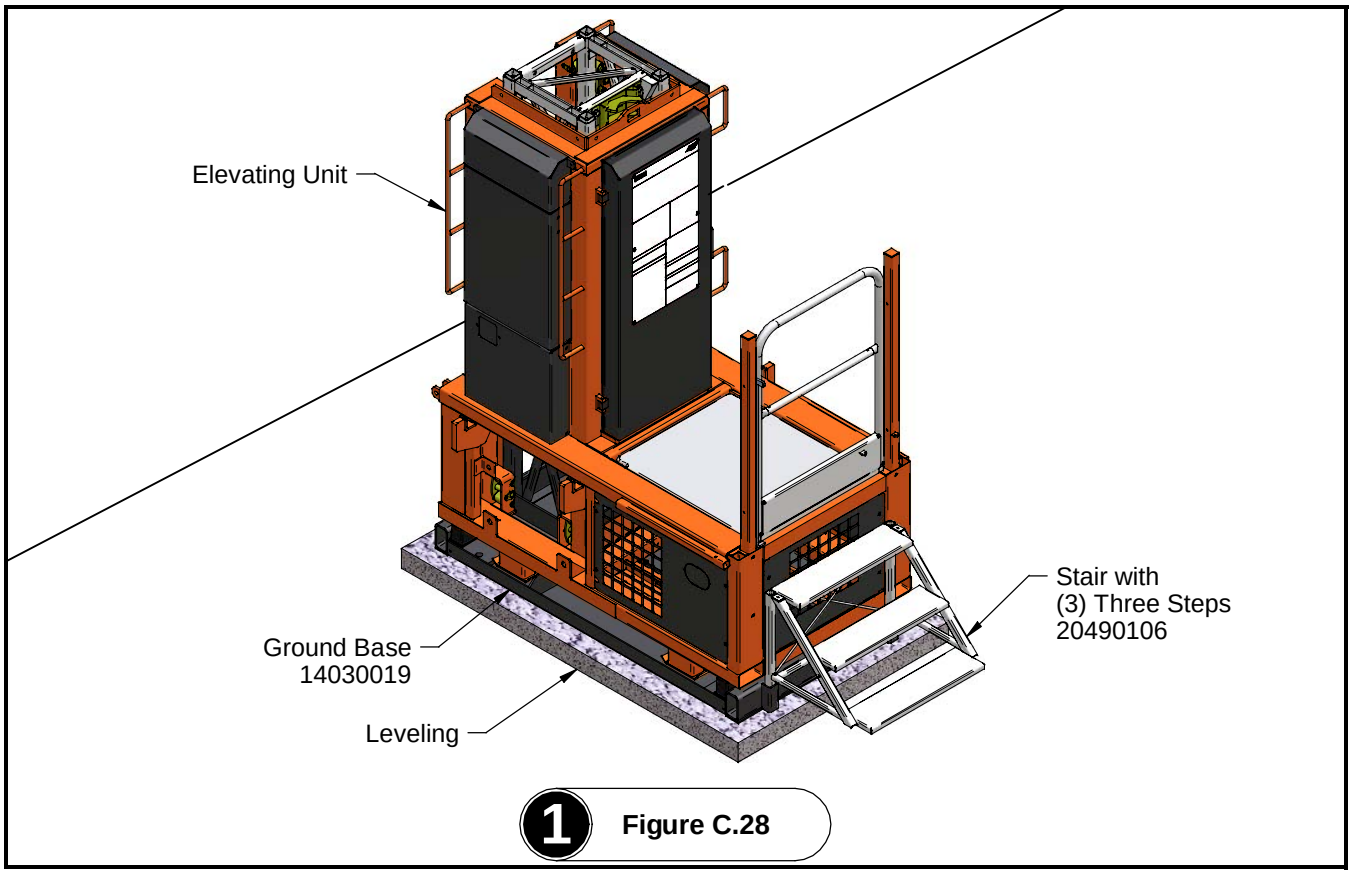
* Wear a safety harness at all time during the installation and dismantling procedures of the platform.

* Not considering any of these procedures can cause serious material and corporal damages, as well as death. If you are in presence of a situation other than the ones mentioned in this manual, contact your **FRACO** representative. **FRACO Ltd**. and / or its importer / representative cannot, in no case be held responsible for any damages due to the non-respect of these procedures.

- During the installation of the first two (2) anchoring devices, you must only use the elevating unit.
- You must secure the end of the mast with a lifting unit that can support the platform for the entire period of installation of the first two (2) anchoring devices.
- You will need five (5) mast sections and two (2) anchoring devices.

Step 1 (see Figure C.28)

6- Install the elevating unit (see Chapitre B - page B-6)



1 Figure C.28

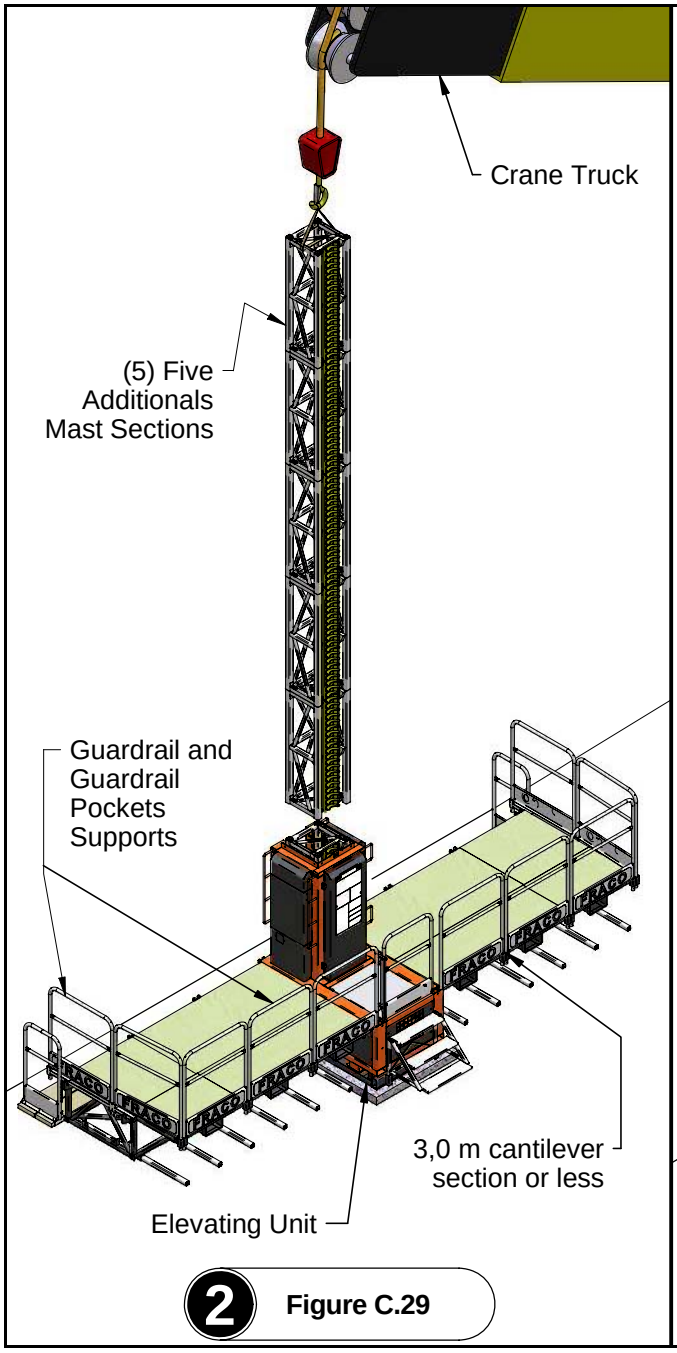
Installing Anchoring Devices with Ground Base (continued)

Step 2 (see Figure C.29)

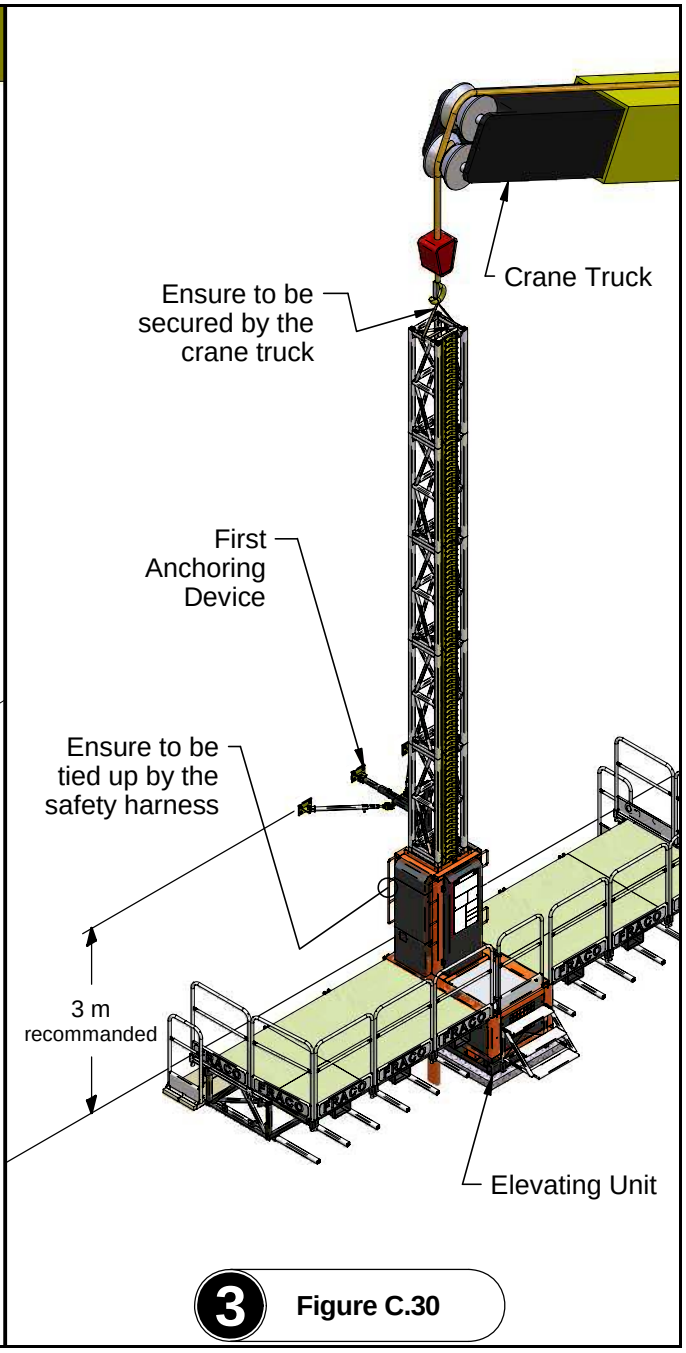
- Install the 3,0 m cantilever section or less, on each side of the elevating unit (see Chapter D).
- Install the outriggers, plank-end guardrails, plank-ties, guardrails, guardrails pockets support and planks on the cantilever sections (see Chapter E).
- Connect (5) five additional mast sections on the ground.
- With the help of a crane truck orient the (5) five mast sections on the mast section which is provided with the elevating unit.
- Bolt the (5) five additional mast sections to the mast section which is provided with the elevating unit.

Step 3 (see Figure C.30)

1- Always ensure to be tied up by the safety harness.
2- Install the planks and plank-ties in order to cover the anchor space.
3- Raise the elevating unit and make sure that you continue to be secured by the crane truck.
4- Install the first anchoring device at 3,0 m from the ground (according to recommended dimensions) (see page C-17 to C-25).



2 **Figure C.29**



3 **Figure C.30**

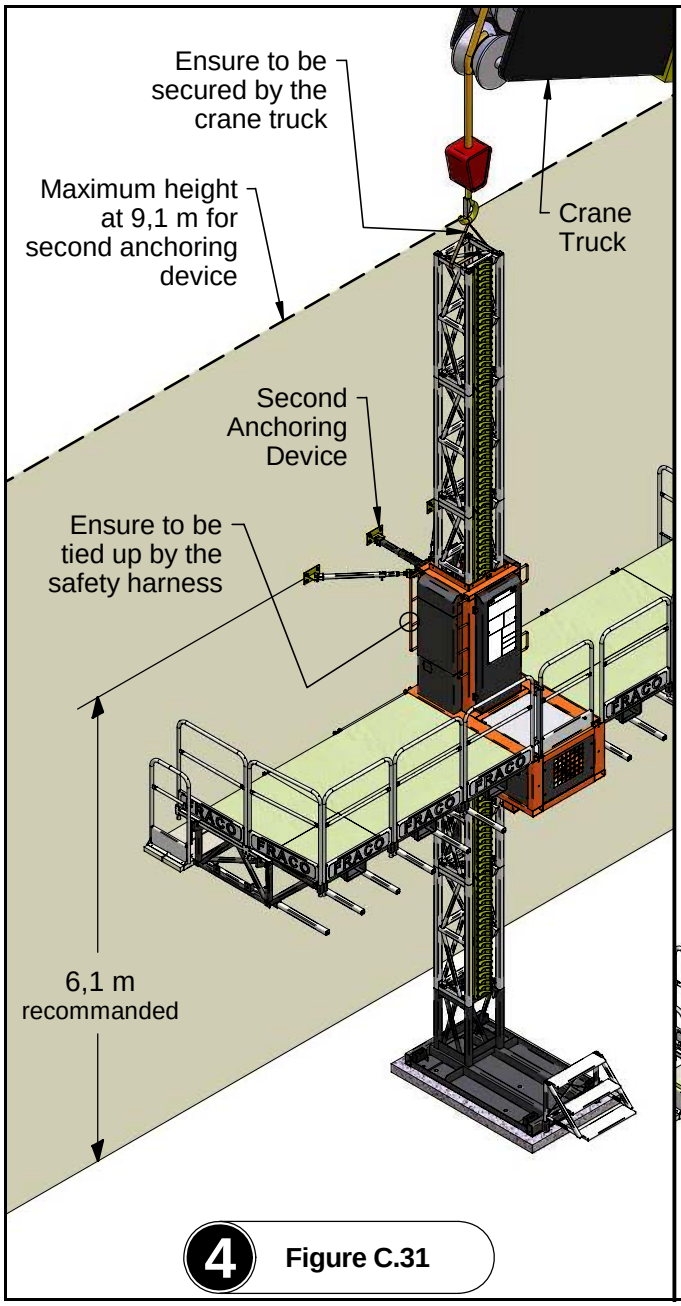
Installing Anchoring Devices with Ground Base (continued)

Step 4 (see Figure C-31)

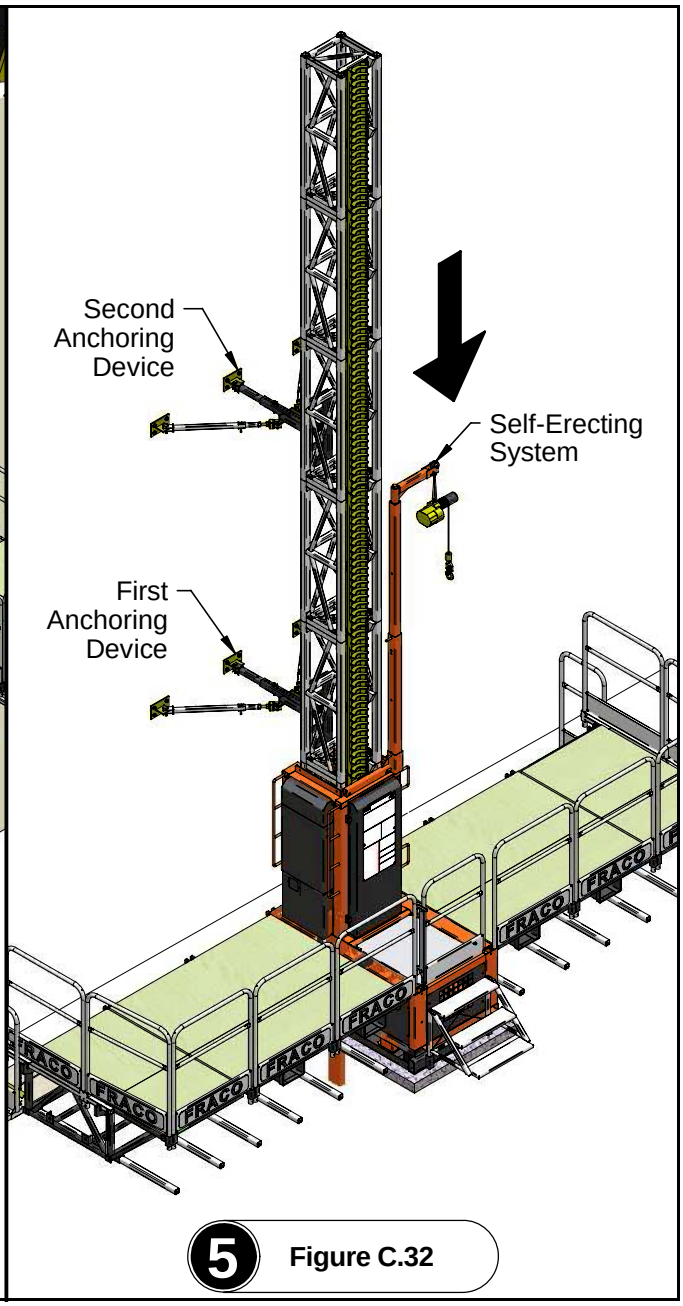
- Remove the planks and plank-ties (in the anchor space) before raising the elevating unit.
- Replace the plank-ties and planks (in the anchor scape) on the elevating unit.
- Attention, maximal height at 9,1 m for the second anchoring device.
- Install the second anchoring device at 6,1 m from the ground (according to recommended dimensions) (see page C-17 to C-25).
- Ensure to be secured by the crane truck.

Step 5 (see Figure C.32) (self-erecting system only)

- Once the first (2) two anchoring devices are installed, lower the elevating unit to the ground.
- Install the self-erecting system (see Page C-25 to C-26).



4 Figure C.31



5 Figure C.32

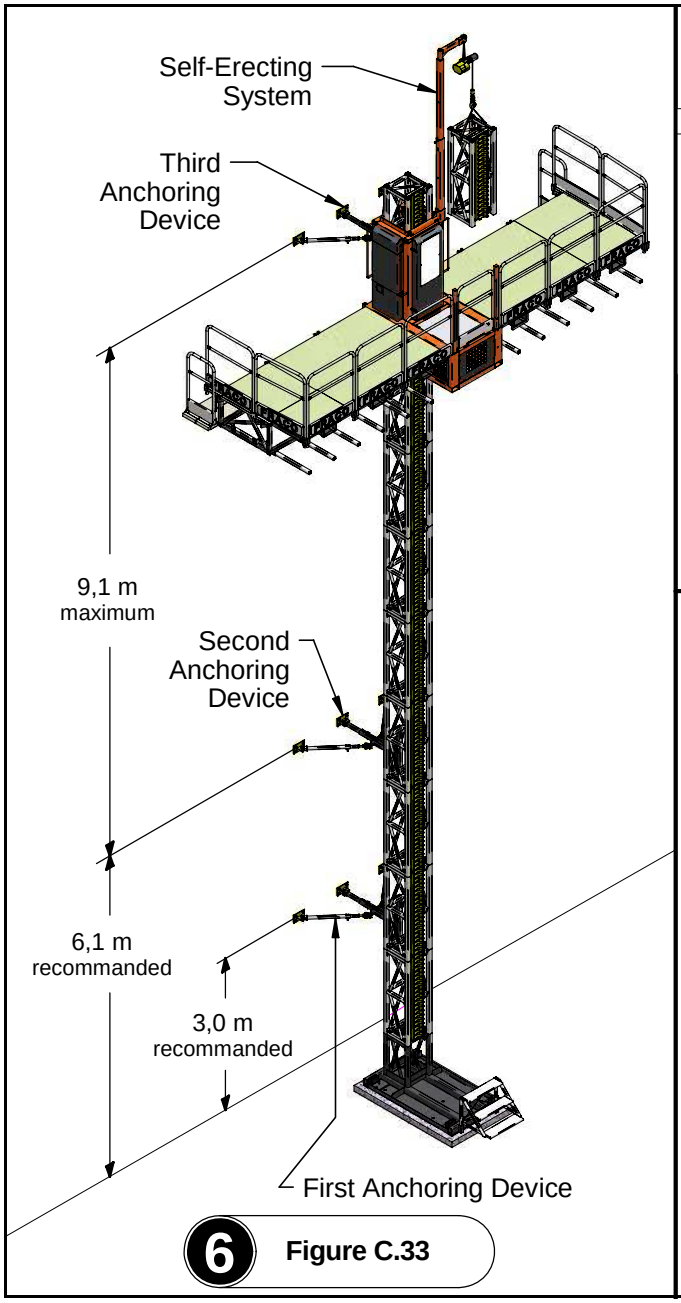
Installing Anchoring Devices with Ground Base (continued)

Step 6a (see Figure C.33 and C.34) (self-erecting system)

- If you use the bridge, install the bride sections (see Chapter D - page D-9 to D-12).
- Load (6) six mast sections on each side of the platform (see Figure C.24) and raise the platform.
- Finish the installation of the mast sections and anchoring devices according to the desired height.
- Do not exceed the distance of 9,1 m between the anchoring devices.
- Once the last mast section is installed, bolt on the mast end section.
- When the mast installation is completed, lower the platform and remove the self-erecting system.
- Finish the installation of the platform (turnbuckle of the cantilever section, guardrail, etc...)
- Install the wire mesh protection on the elevating unit (see Chapter B «Wire Mesh Protection»).

Step 6b (see Figure C.33 and C.35) (crane truck)

- If you use the bridge, install the bride sections (see Chapter D - page D-9 to D-12).
- Finish the installation of the mast sections and anchoring devices according to the desired height.
- You can join up to 9.1 m of mast sections for next bolting them on the previous mast section using the crane truck (see Figures C.35).
- Do not exceed the distance of 9,1 m between the anchoring devices.
- Once the last mast section is installed, bolt on the mast end section.
- When the mast installation is completed, lower the platform.
- Finish the installation of the platform (turnbuckle of the cantilever section, guardrail, etc...)
- Install the wire mesh protection on the elevating unit (see Chapter B «Wire Mesh Protection»).



6 **Figure C.33**

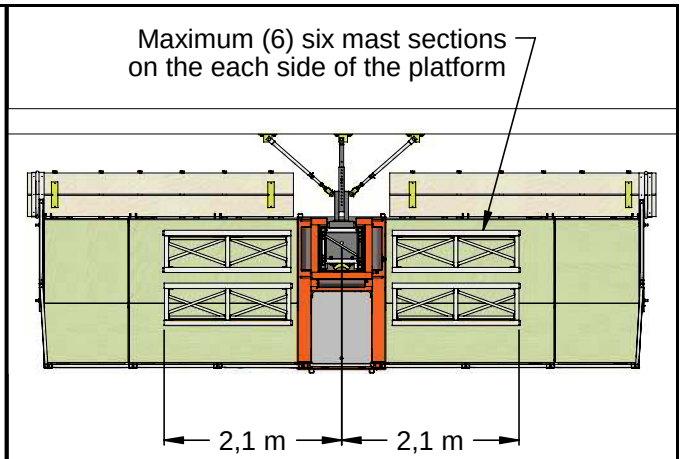


Figure C.34
Loading Zone

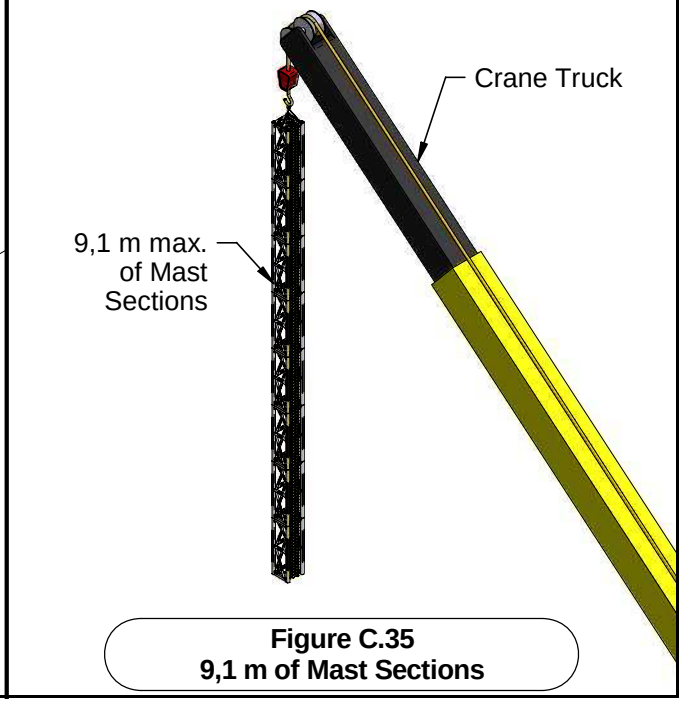


Figure C.35
9,1 m of Mast Sections

Installing Anchoring Devices with Freestanding Base

Step 1 (see Figure C.36)

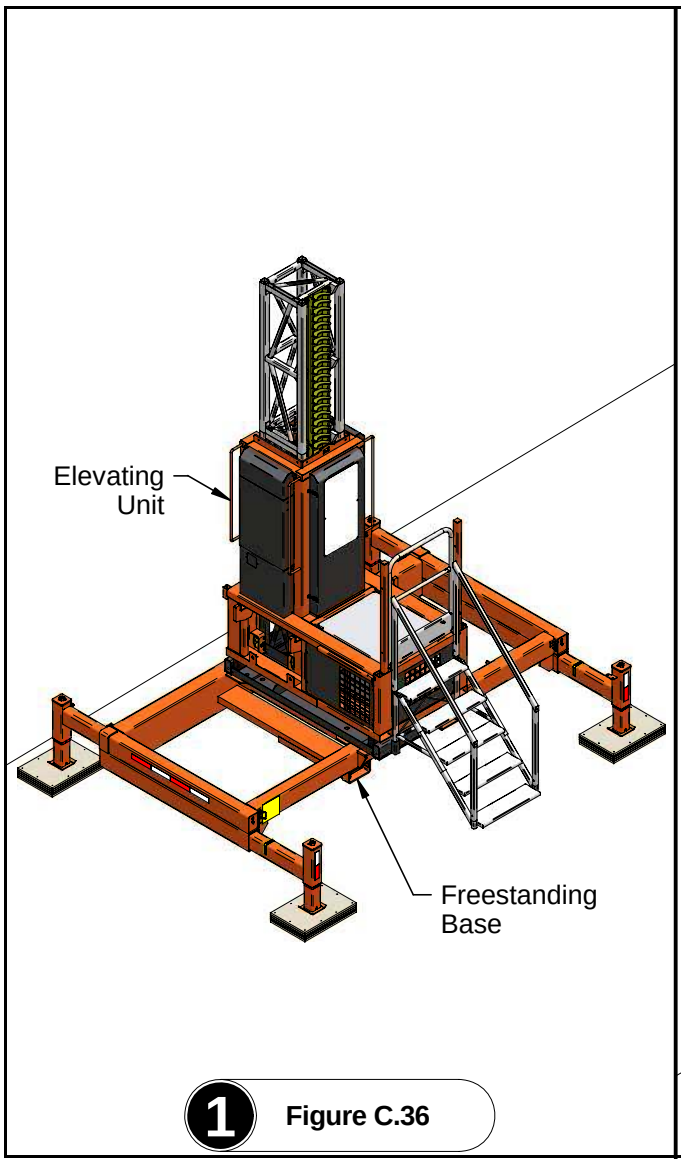
- Install the elevating unit on the freestanding base (see Chapter B - page B-15 to B-18).

Step 2a (see Figure C.37 and C.34) (self-erecting system)

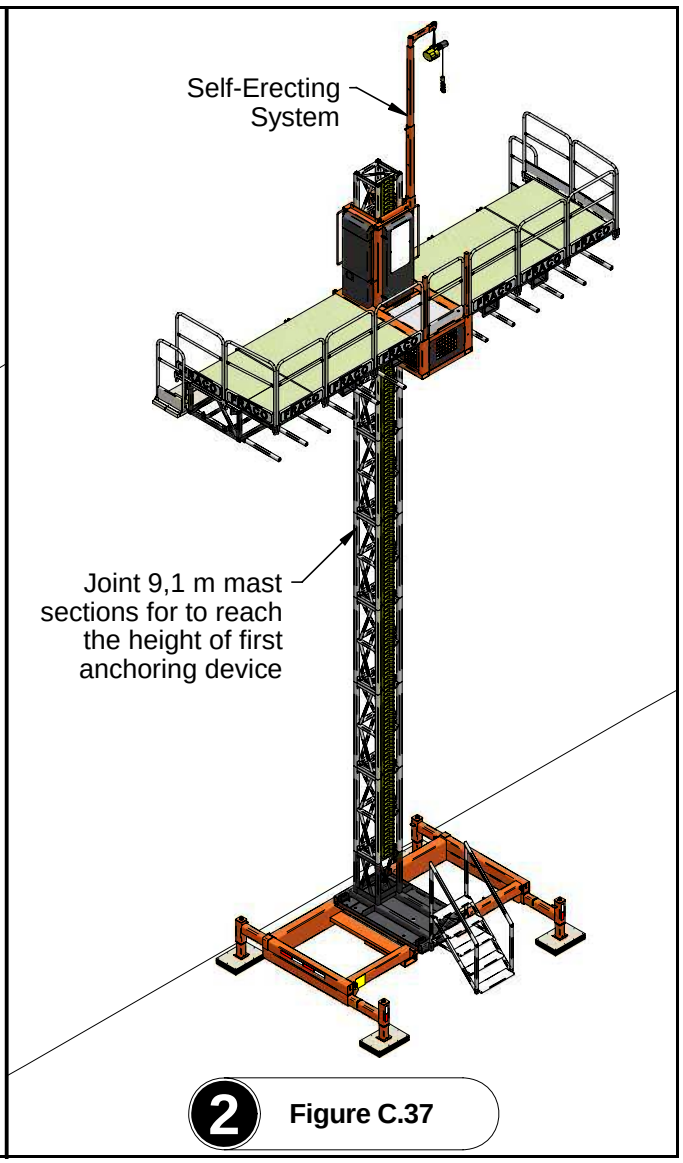
- Install the bridge sections (if is bridge configuration) and the 3,0 m cantilever sections or less (see Chapter D).
- Install the outriggers, plank-end guardrails, plank-ties, guardrails, guardrails pockets support and planks on the cantilever sections or bridge sections (see Chapter E).
- Do not place more than (6) six mast sections on each side of the platform (see Figure C.24).
- Set-up the self-erecting system and place the planks and plank-ties on the anchor space.
- Join 9,1 m of mast sections with the self-erecting system in order to be able to install the first anchoring device (according to recommended dimensions).

Step 2b (see Figure C.37 and C.35) (crane truck)

- Install the bridge sections (if is bridge configuration) and the 3,0 m cantilever sections or less (see Chapter D).
- Install the outriggers, plank-end guardrails, plank-ties, guardrails, guardrails pockets support and planks on the cantilever sections or bridge sections (see Chapter E).
- You can join up to 9,1 m of mast sections for next bolting them on the previous mast section using the crane truck (see Figures C.35).
- Place the planks and plank-ties on the anchor space.



1 **Figure C.36**



2 **Figure C.37**

Installing Anchoring Devices with Freestanding Base (continued)

Step 3 (see Figure C.38)

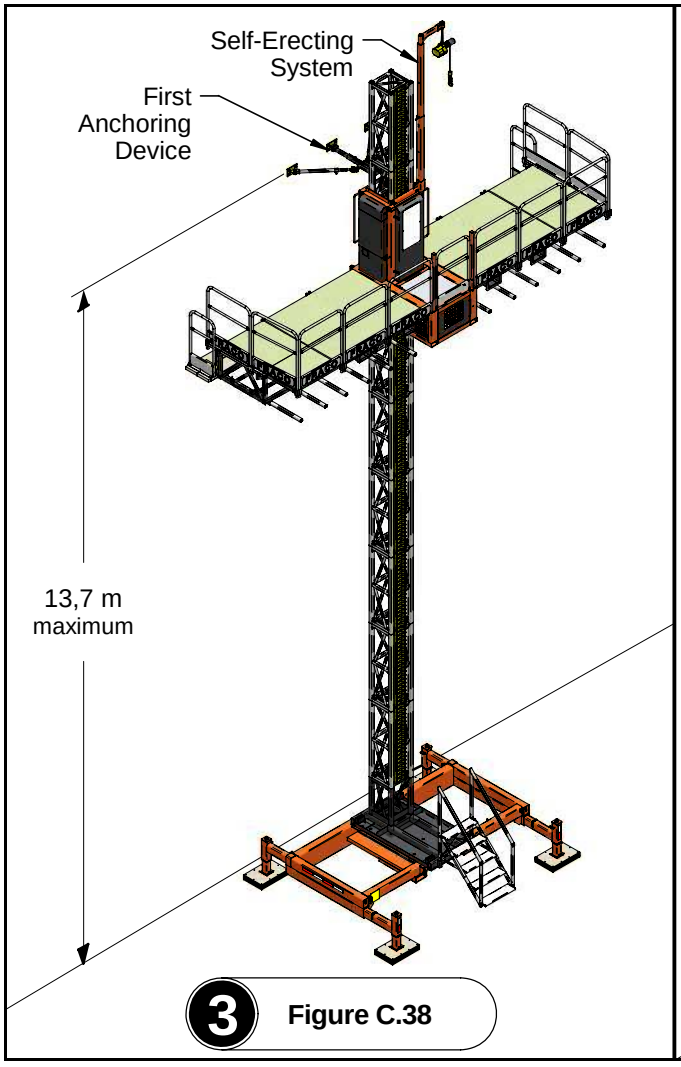
- Install the first anchoring device at 13,7 m from the ground (according to recommended dimensions) (see page C-13 to C-20).

Step 4a (see Figure C.39 and C.34) (self-erecting system)

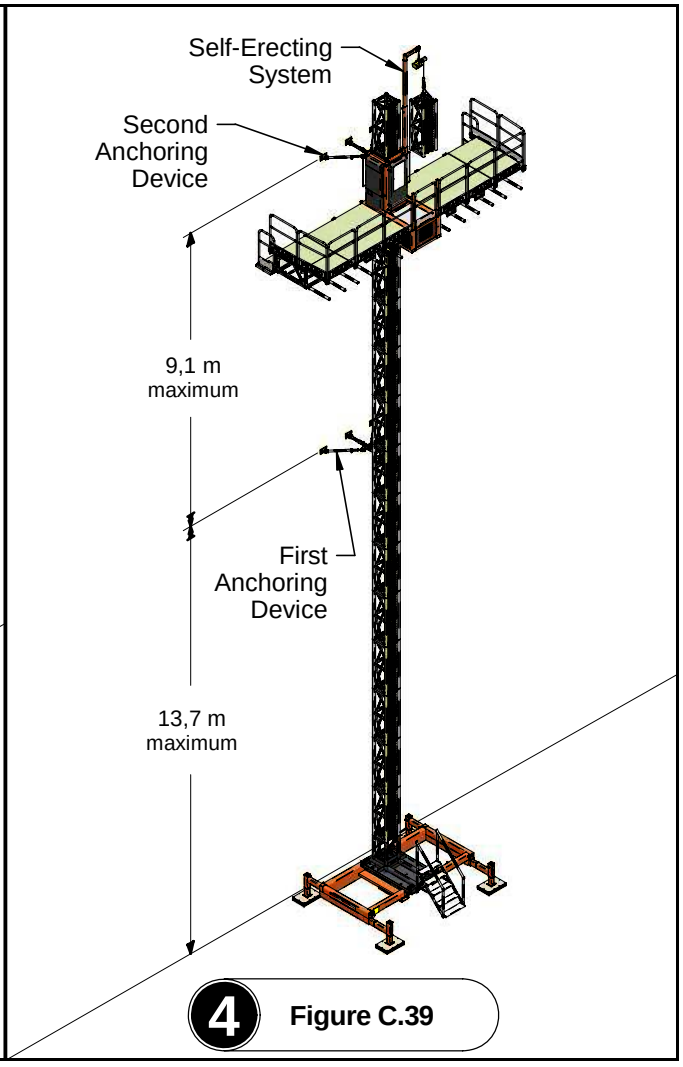
- Load (6) six mast sections on each side of the platform (see Figure C.34) and raise the platform.
- Continue the installation of the mast sections until reaching the future position of the second anchoring device.
- Replace the planks and plank-ties on the anchor space.
- Install the second anchoring device at 9,1 m above the first anchoring device (see page C-17 to C-25).
- Complete the installation of the mast sections and anchoring devices according to the desired height.
- Do not exceed the distance of 9,1 m between the anchoring devices.
- Once the last mast section is installed, bolt on the mast end section.
- When the mast installation is completed, lower the platform and remove the self-erecting system.
- Finish the installation of the platform (turnbuckle of the cantilever section, guardrail, etc...)
- Install the wire mesh protection on the elevating unit (see Chapter B «Wire Mesh Protection»).

Step 4b (see Figure C.39 and C.35) (crane truck)

- You can join up to 9,1 m of mast sections for next bolting them on the previous mast section using the crane truck (see Figures C.35).
- Continue the installation of the mast sections until reaching the future position of the second anchoring device.
- Replace the planks.
- Install the second anchoring device at 9,1 m above the first anchoring device (see page C-17 to C-25).
- Complete the installation of the mast sections and anchoring devices until reaching the desired height.
- Do not exceed the distance of 9,1 m between the anchoring devices.
- Once the last mast section is installed, bolt on the mast end section.
- Finish the installation of the platform (turnbuckle of the cantilever section, guardrail, etc...)
- Install the wire mesh protection on the elevating unit (see Chapter B «Wire Mesh Protection»).



3 Figure C.38



4 Figure C.39

General Steps for Assembling of Anchoring Devices

Step 1 (see Figure C.40)

- Position the wall tie adaptor at the desired point on the mast.
- Bolt the wall tie adaptor on the mast and screw them with the nut plate.

Step 2 (see Figure C.41)

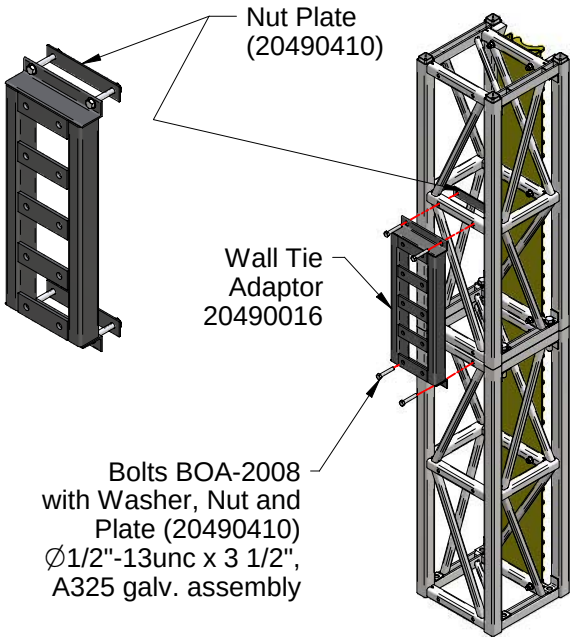
- Slide the central tube into the wall tie tube and fix it with a locking pins supplied with the wall tie.

Step 3 (see Figure C.42)

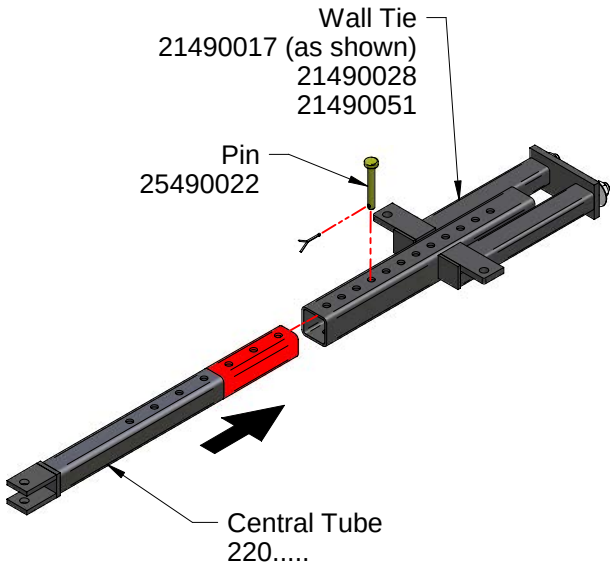
- Bolt the wall tie to the wall tie adaptor.

Step 4 (see Figure C.43)

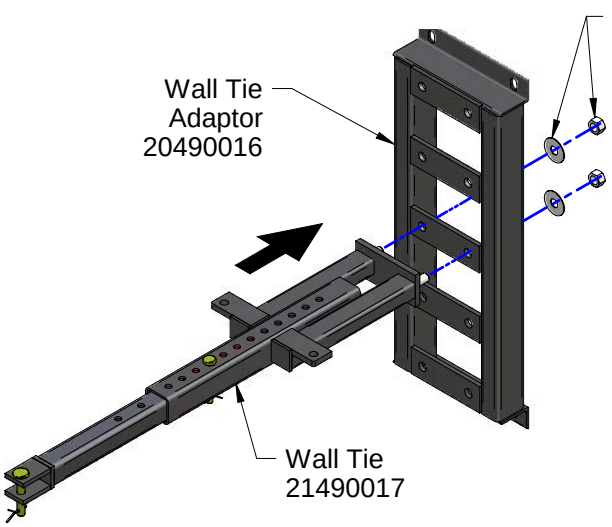
- Fix the turnbuckles on the wall tie with the locking pins supplied with the turnbuckle.



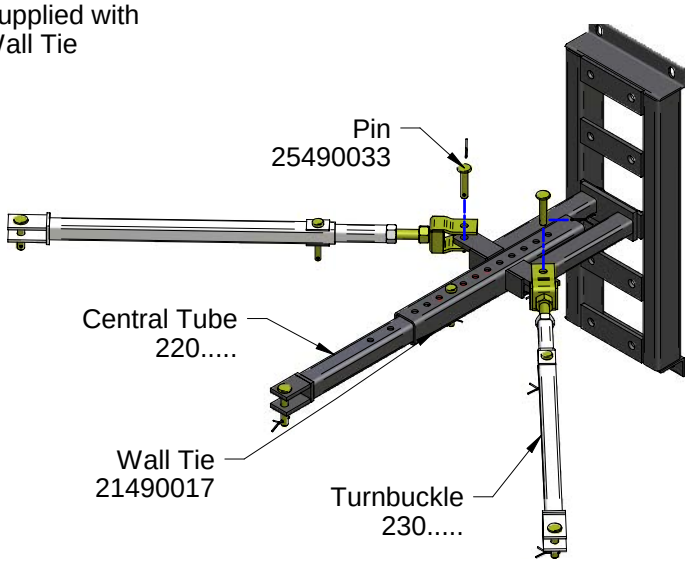
1 **Figure C.40**



2 **Figure C.41**



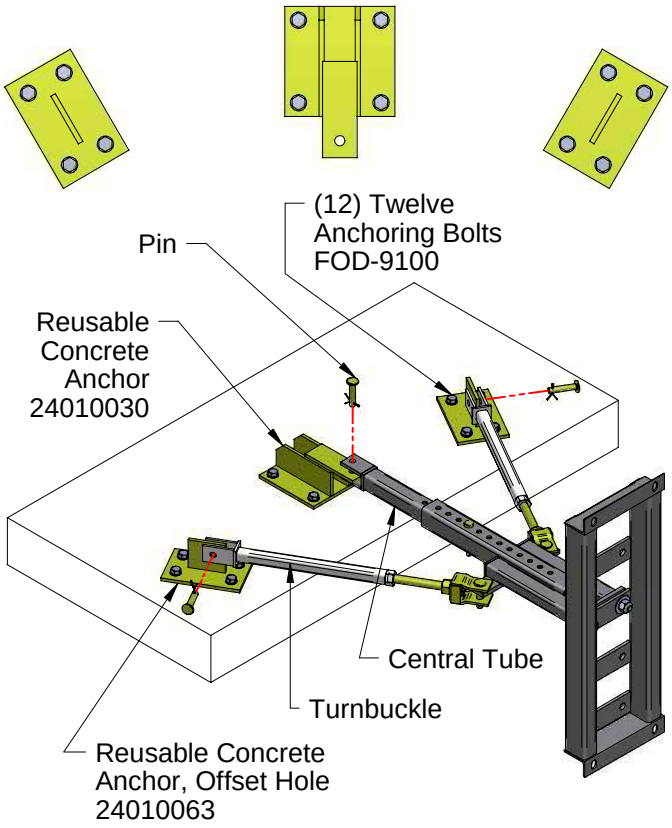
3 **Figure C.42**



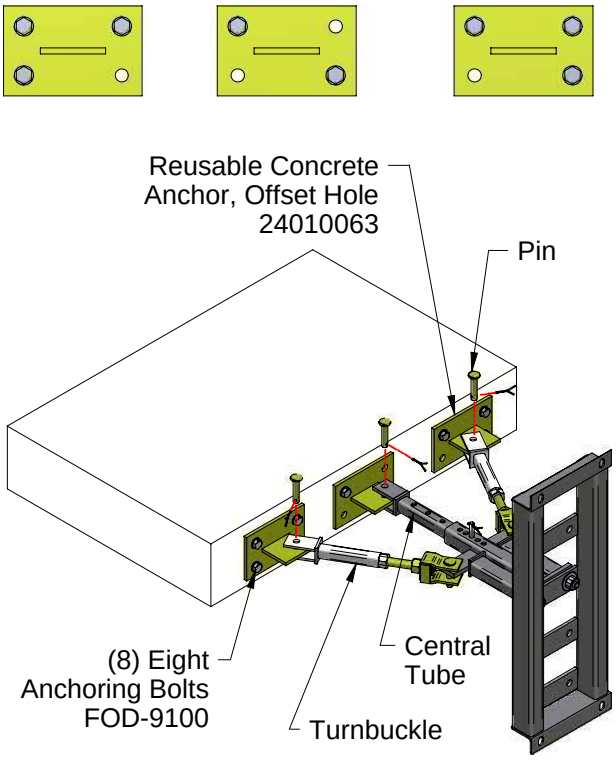
4 **Figure C.43**

Installing Bolted Anchorings

- Before beginning, you must adhere to the instructions on page C-4.
- Determine the area in which to drill the holes in the concrete slab (see page C-6 «Turnbuckle Opening Constraints»).
- Bolt the desired anchoring with an ∅M16 x 130 mm anchoring bolts (see Figure C.44 to C.49).
- Fix the turnbuckles and the central tube (see Figure C.44 to C.49).
- Verify that all the locking pins are fixed.
- Lock the anchoring device by putting the turnbuckles under tension and the central tube under compression.



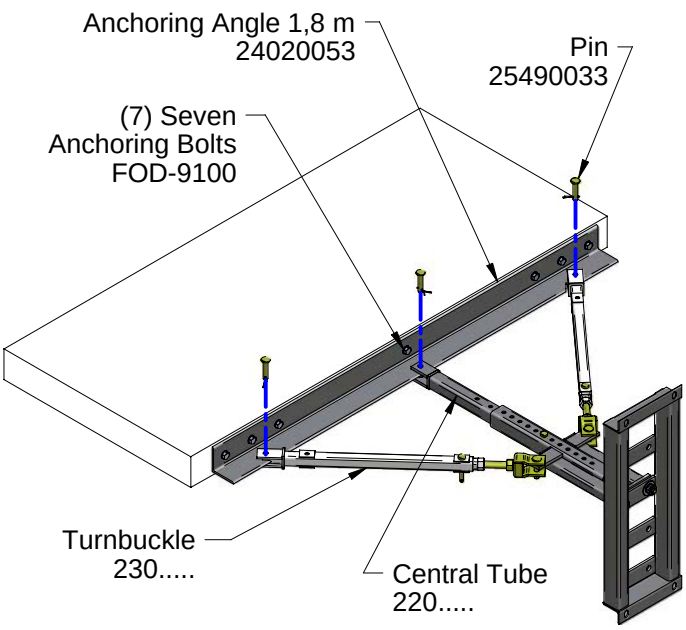
A **Figure C.44**



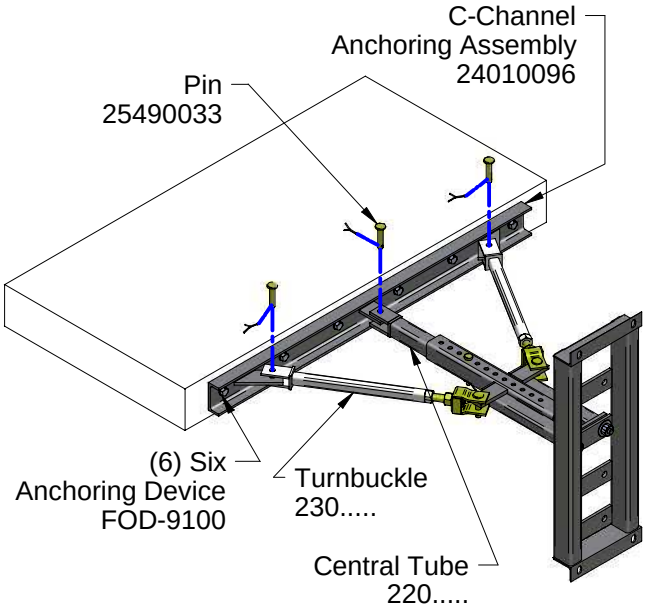
B **Figure C.45**

**** MUST BE APPROVE BY THE SITE ENGINEER ****

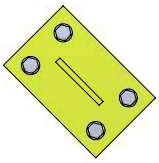
Installing Bolted Anchorings (continued)

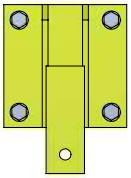


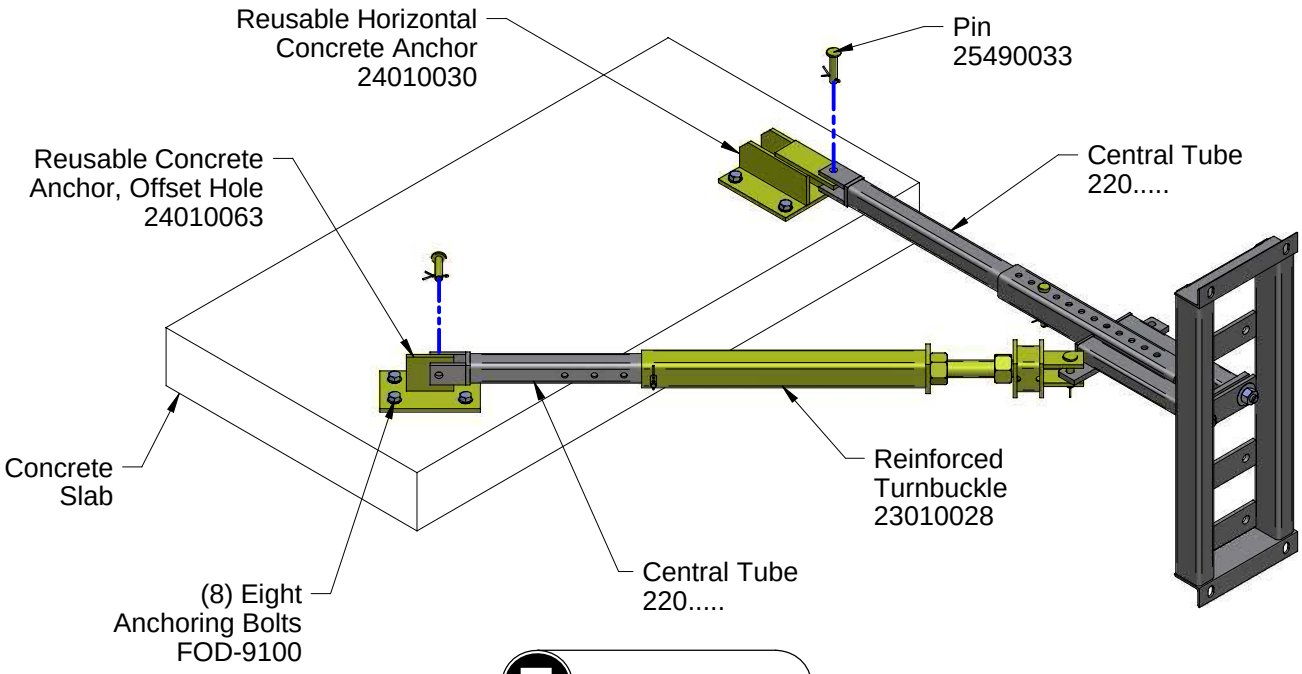
C **Figure C.46**



D **Figure C.47**







E **Figure C.48**

**** MUST BE APPROVE BY THE SITE ENGINEER ****

Installation of bolted Anchors

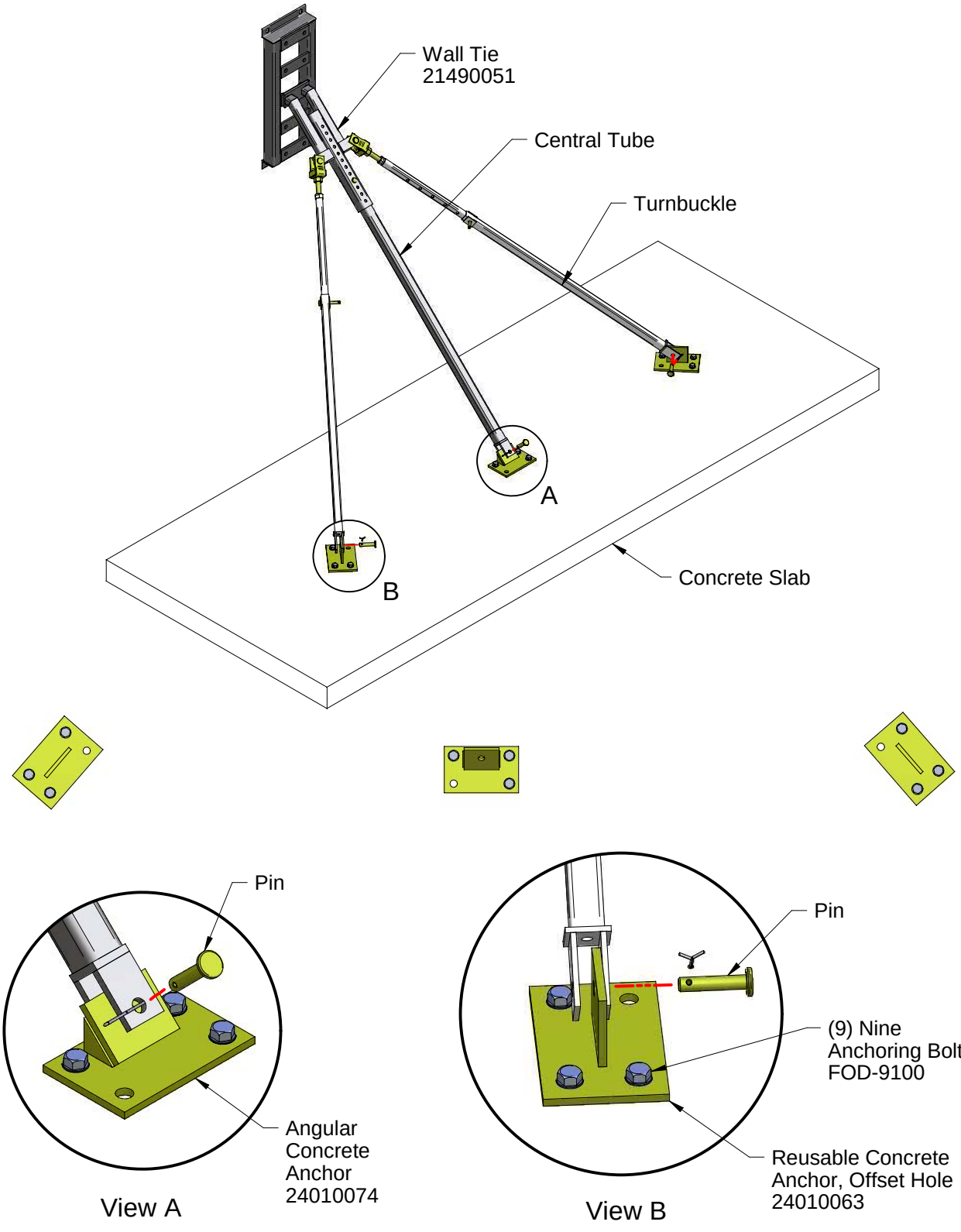


Figure C.49

**** MUST BE APPROVE BY THE SITE ENGINEER ****

Installation of Welded Anchors

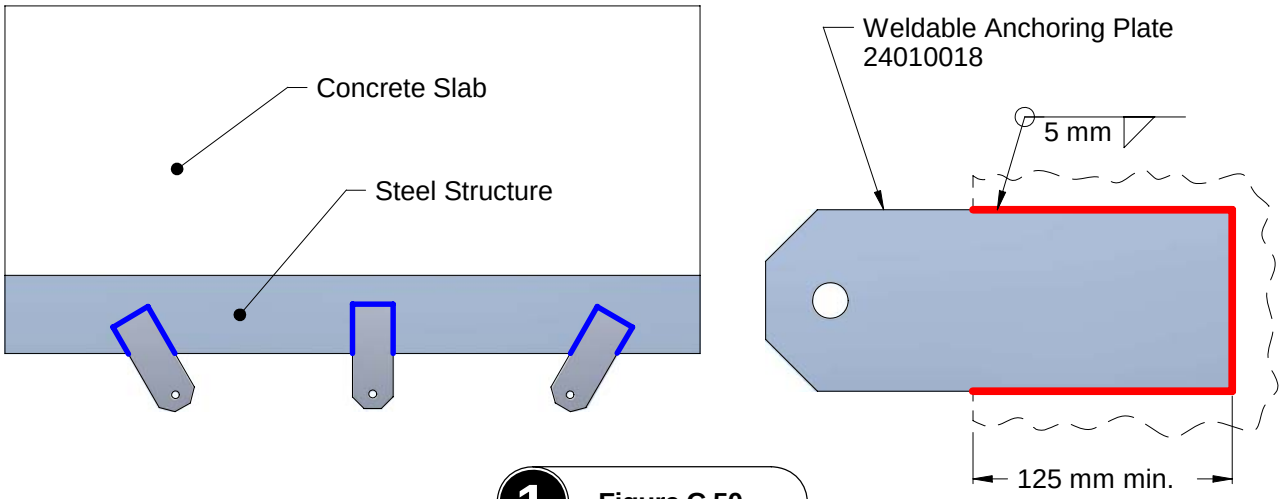
Step 1 (see Figure C.50) (must be welded by a certified welder)

- Before beginning, you must adhere to the instructions on page C-4.
- Determine the area where the weldable anchoring plates will be welded on the steel structure (see page C-6 «Turnbuckle Opening Constraints»).
- Weld the weldable anchoring plates on the steel structure with a minimum welded depth of 125 mm.

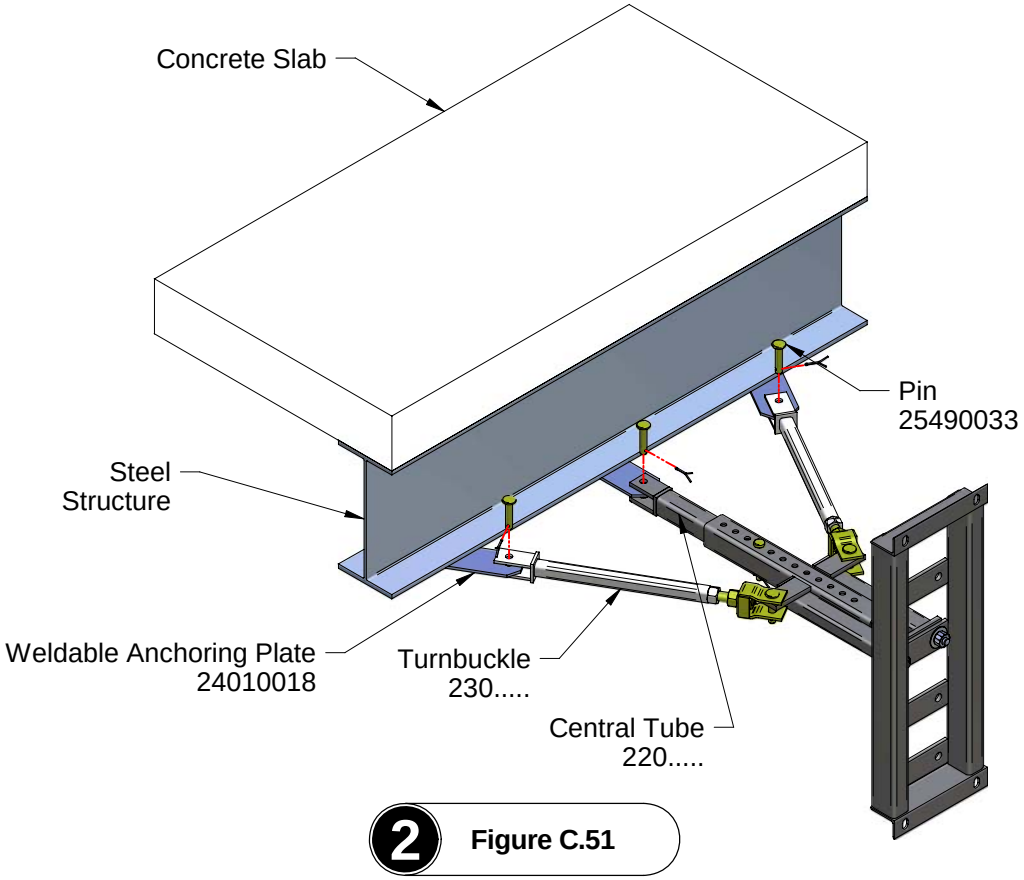
Step 2 (see Figure C.51)

- Fix the turnbuckles and the central tube.
- Verify that all the locking pins are attached.
- Lock the anchoring device by putting the turnbuckles under tension and the central tube under compression.

**** MUST BE APPROVE BY THE SITE ENGINEER ****



1 **Figure C.50**



2 **Figure C.51**

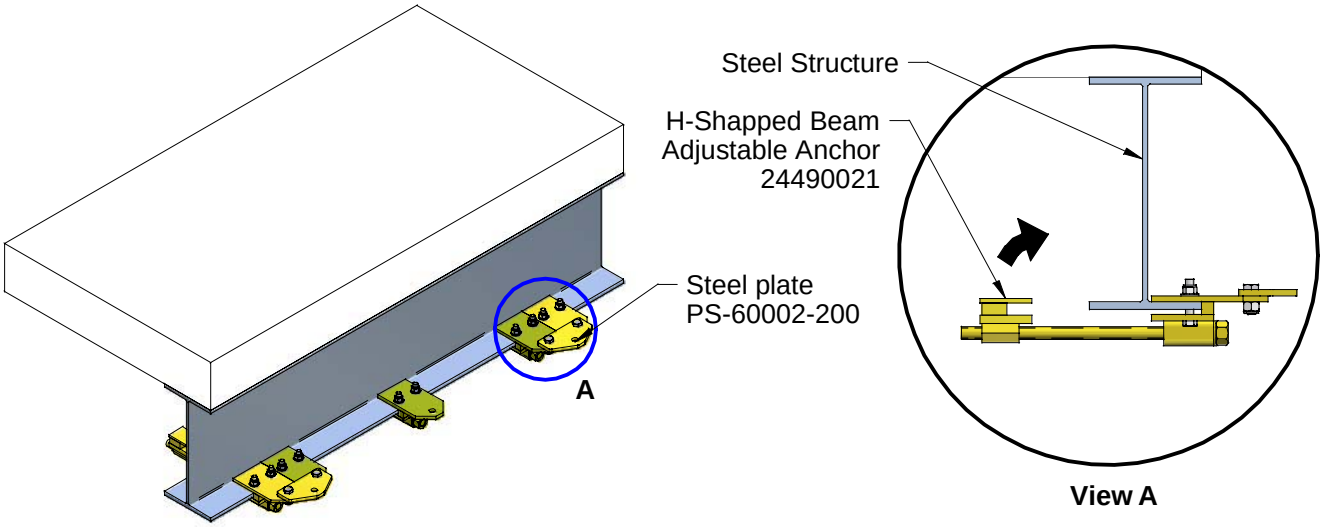
Installation of H-Beam clamp anchors (optional)

Step 1 (see Figure 52)

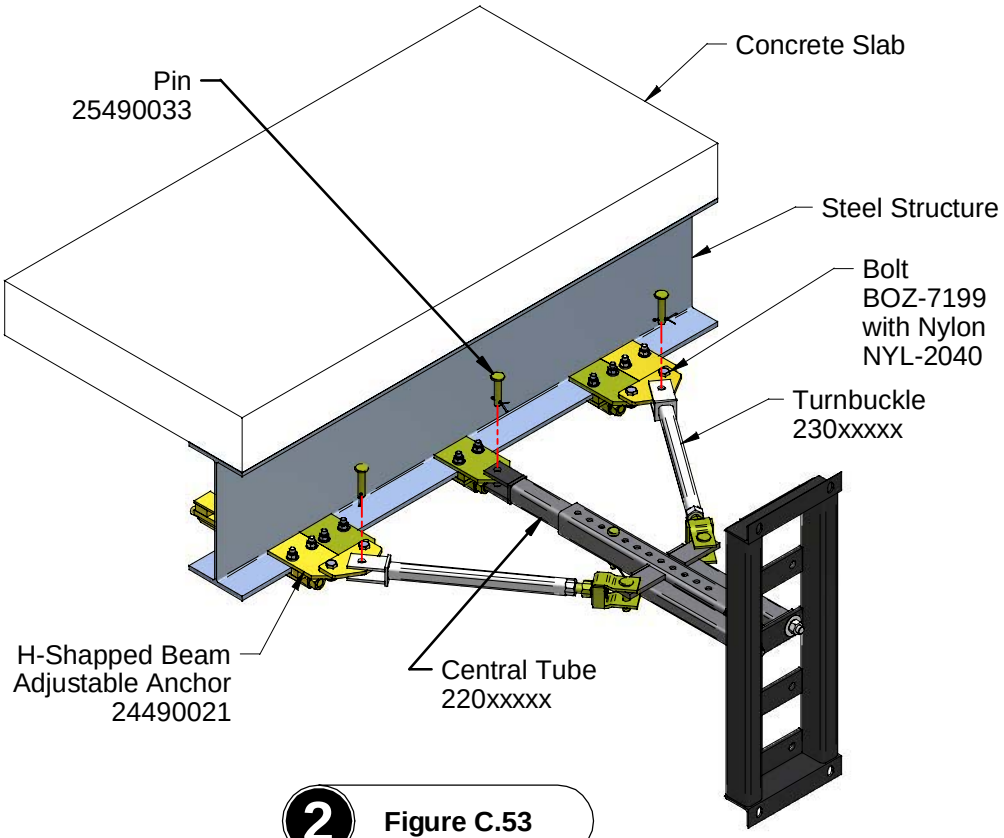
- Before beginning, you must adhere to the instructions on page C-4.
- Determine the area where the H-shaped beam adjustable anchors will be positioned on the steel structure (see page C-6 «Tunrbuckle Opening Constraints»).
- Place the H-shaped beam adjustable anchors on the steel structure.

Step 2 (see Figure 53)

- Fix the turnbuckles and the central tube.
- Verify that all the locking pins are attached.
- Lock the anchoring device by putting the turnbuckles under tension and the central tube under compression.



1 **Figure C.52**



2 **Figure C.53**

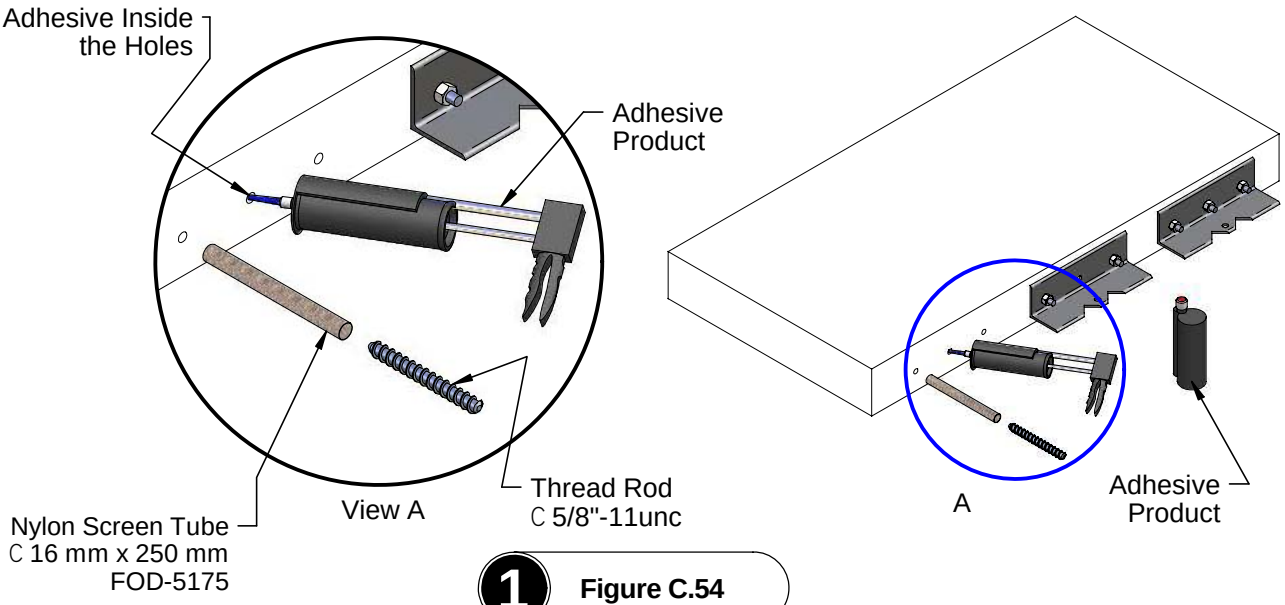
Inatallation of Anchors with Chemical Product

Step 1 (see Figure C.54)

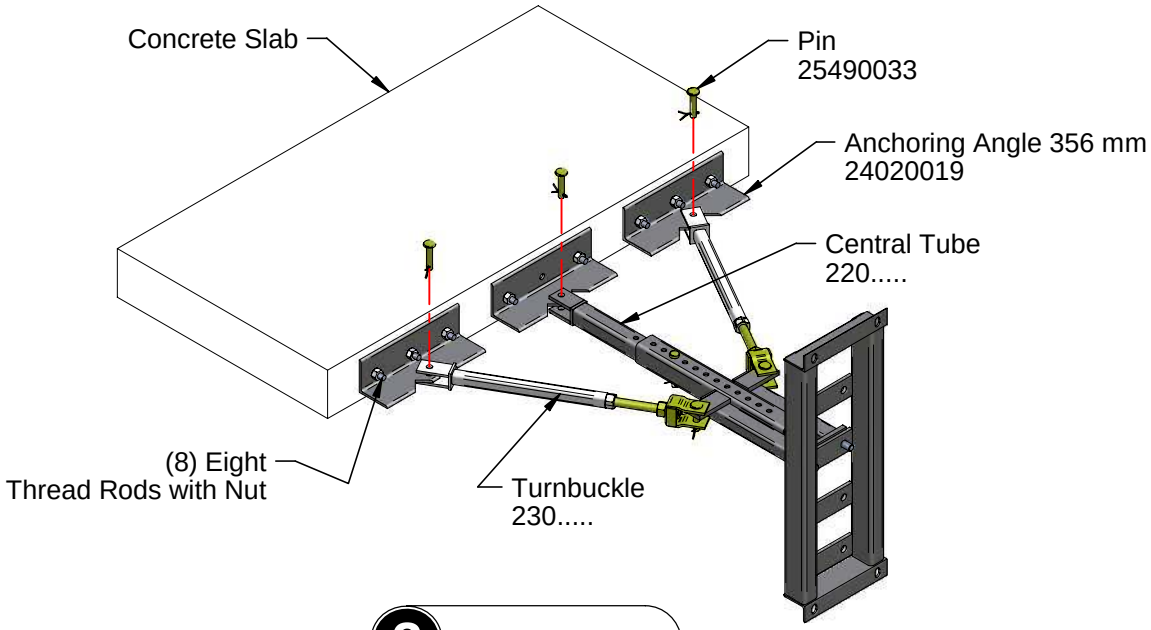
1- During installation of anchoring devices, follow the recommendations on page C-4.
2- Identify location to drill the holes on the slab in accordance with type of anchor being use. (see page C-19 to C-26)
3- Drill holes ∅ 3/4” (19 mm) or ∅ 7/8” (22 mm) in the slab with a minimum depth of 6” (150 mm).
4- Clean holes (see Figure C.55)
5- Inject chemical mix inside the hole using a chemical product.
6- Put in place the threaded rod with a screen nylon tube (if there is a gap) and temperately bolt the anchoring angle, giving time to the mixture to harden. (see manufacturer specification)

Note:

- Refer to the plan and engineering drawing specific to the installation to identify the diameter of threaded rod and distances to respect.



1 Figure C.54



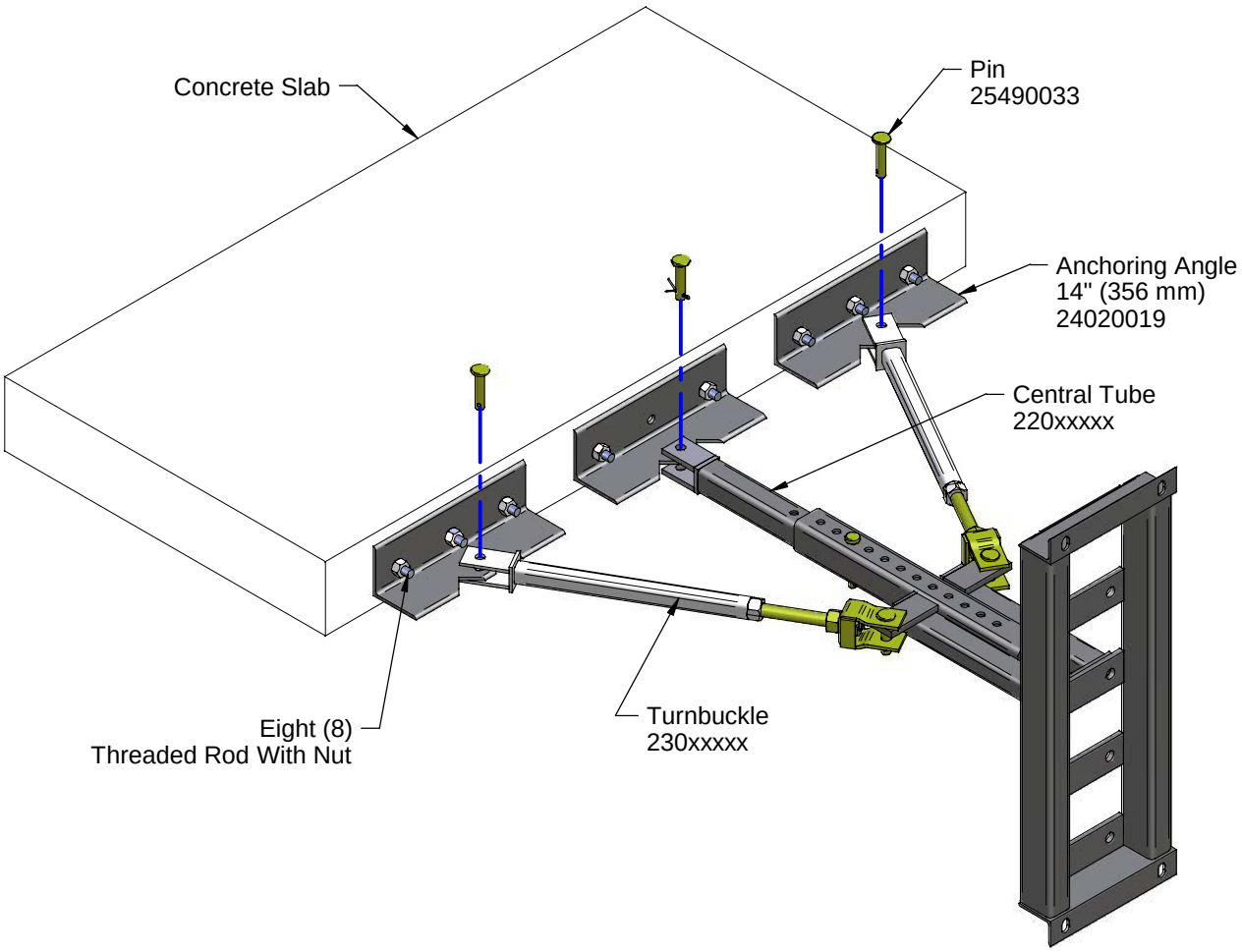
2 Figure C.55

**** MUST BE APROVE BY THE SITE ENGINEER ****

Installation of Anchors with Chemical Product (Continued)

Step 2 (see Figure C.56)

7- Once the mix has harden, secure the threaded rod.
8- Fix turnbuckles and central tube.
9- Make sure all pins are in place.
10- Secure turnbuckles to lock the anchoring device in place. The turnbuckles will be in tension and central tube will be in compression.



2 Figure C.56

**** MUST BE APROVE BY THE SITE ENGINEER ****

Installation of Fixed Anchors

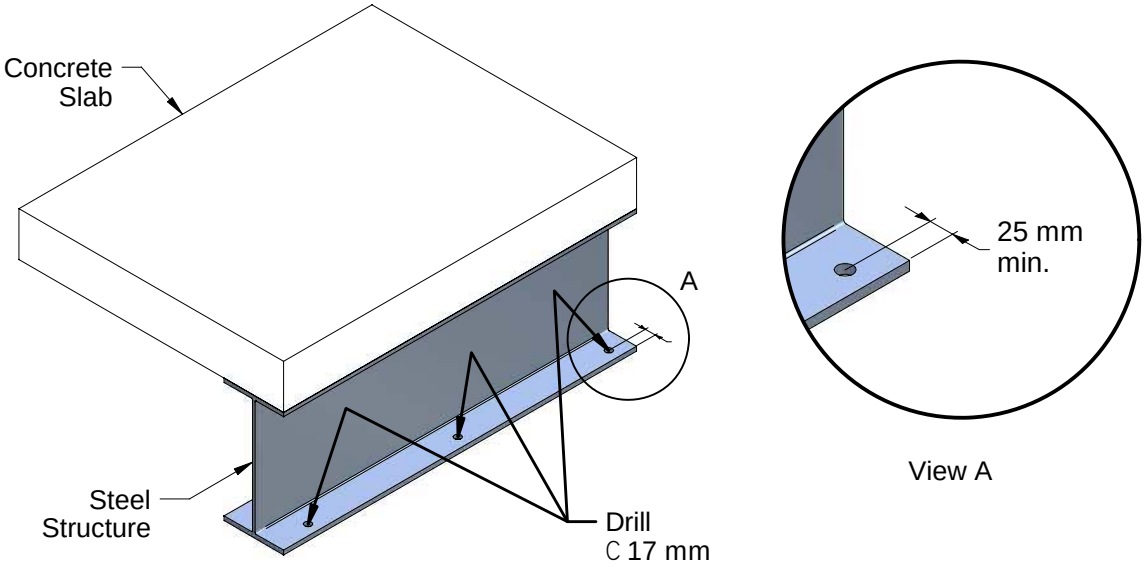
Step 1 (see Figure C.57)

- Before beginning, you must adhere to the instructions on page C-4.
- Determine the area where the holes will be drilled in the steel structure (see page C-6 «Turnbuckle Opening Constraints»).
- Drill the holes with ∅17 mm at an distance of 25 mm from the edge of the steel structure.

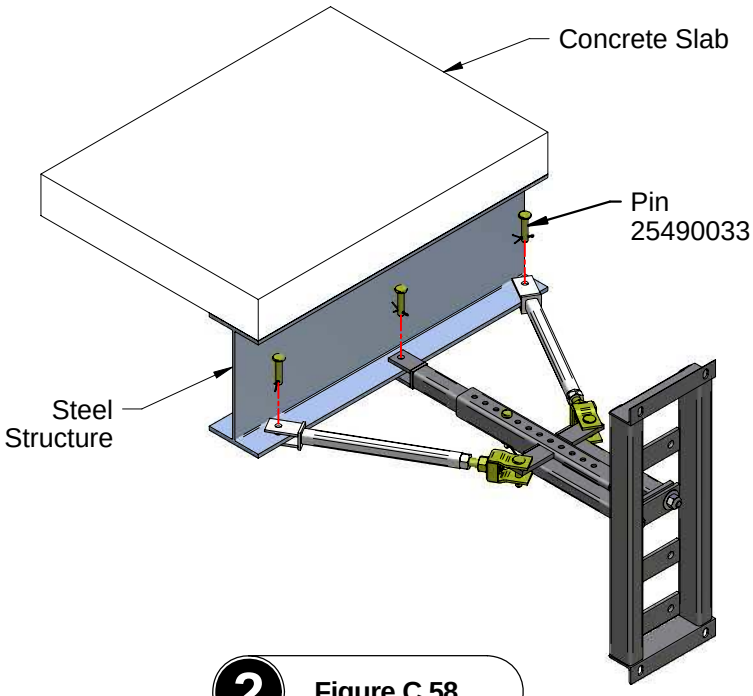
Step 2 (see Figure C.58)

- Fix the turnbuckles and the central tube.
- Verify that all the locking pins are attached.
- Lock the anchoring device by putting the turnbuckles under tension and the central tube under compression.

**** MUST BE APPROVE BY THE SITE ENGINEER ****



1 **Figure C.57**



2 **Figure C.58**

Dismantling of Anchoring Devices with Ground Base

Step 1

- Lower the platform to the ground and unload any equipment, material and detritus from the platform.
- Remove the wire mesh protection (see Chapter B «Wire Mesh Protection»).
- **Important :** The platform cannot be positioned more than 9,1 m above the highest anchoring device.

Step 1a (see Figure C.58 and C.34) (self-erecting system)

- Set up the self-erecting system (see page C-25 to C-26).
- Raise the platform to the last mast section junction. In the same step, unbolt the mast end section.
- Unbolt and remove the mast sections to the next anchoring device.
- Remove the anchoring device as describe on step 2.

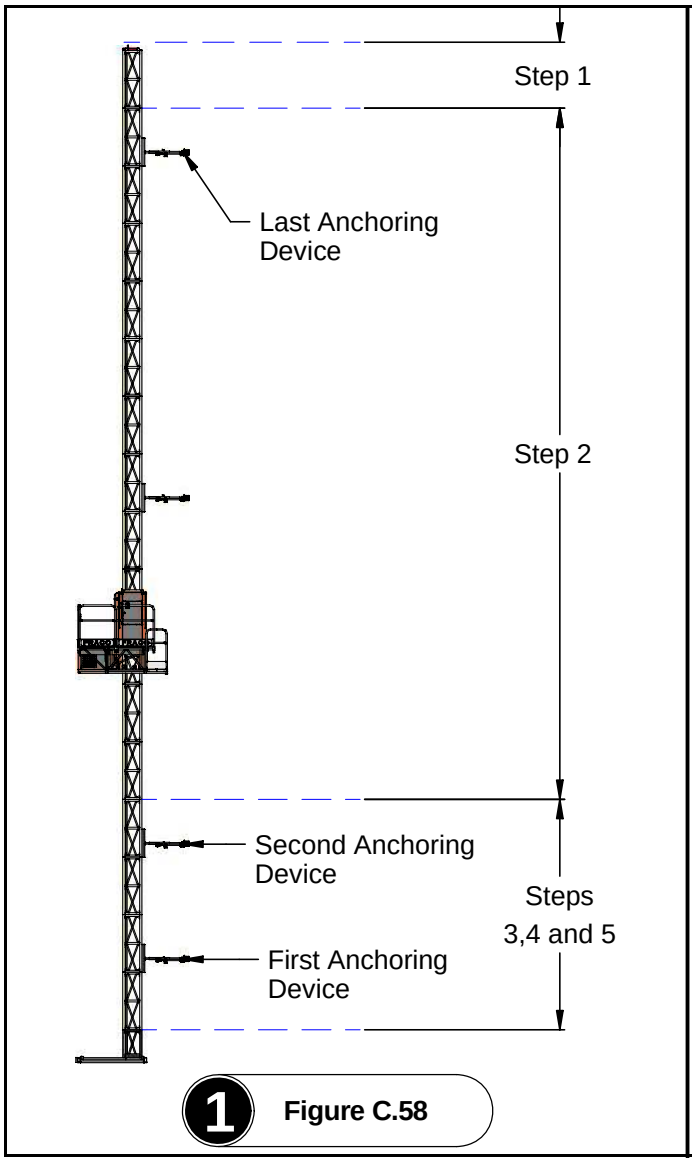
Step 1b (see Figure C.58) (crane truck)

- Raise the platform to the next anchoring device.
- Strap up the top of the mast with a crane truck
- Remove the anchoring device as describe on step 2.
- Unbolt and remove the 9,1 m of mast sections.

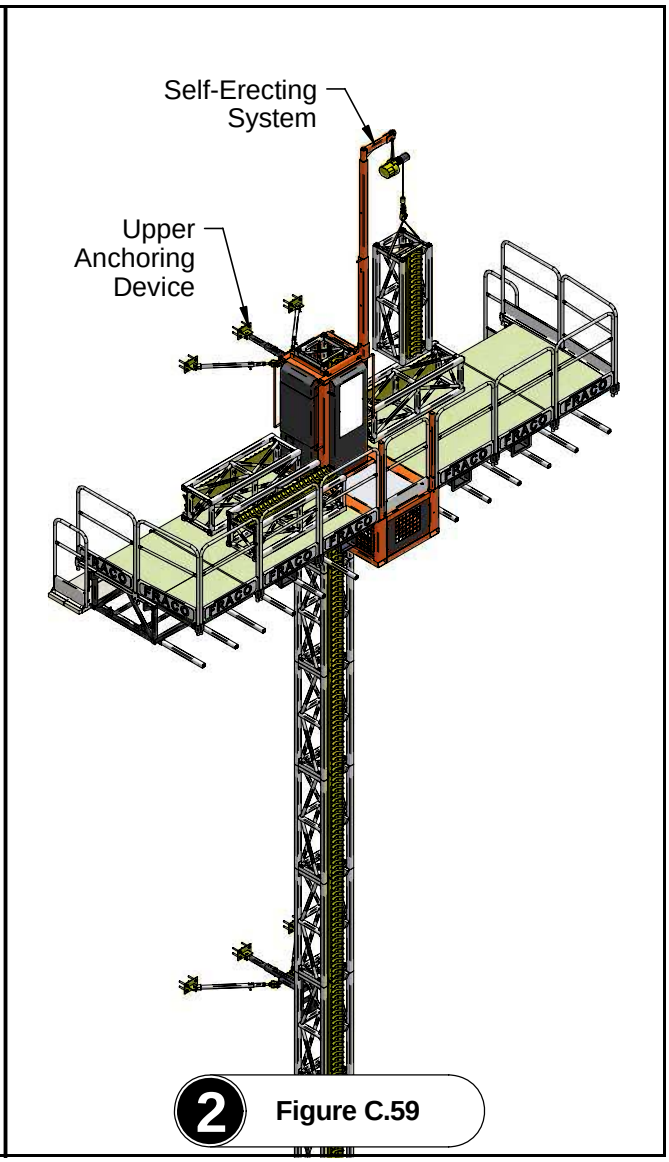
Step 2 (see Figure C.59) (This step is valid for all anchoring devices which are above the first (2) two anchoring devices)

- Elevate the platform until it is below the highest anchoring device.
- Place the planks and plank-ties on the anchor space.
- Slack the turnbuckles and remove the anchoring device.
- Perform the necessary repairs to the wall.
- Remove the planks and plank-ties on the anchor space.
- Unbolt and remove the mast sections to the next anchoring device.
- Finish disassembling the mast sections and anchoring devices to the height of the last (2) two anchoring devices.
- Once (12) twelve mast sections have been placed on the platform ((6) six on each side), lower the platform to the ground and remove the (12) twelfe mast sections (see Figure C.24).

**** Always balance the load on the platform ****



1 **Figure C.58**



2 **Figure C.59**

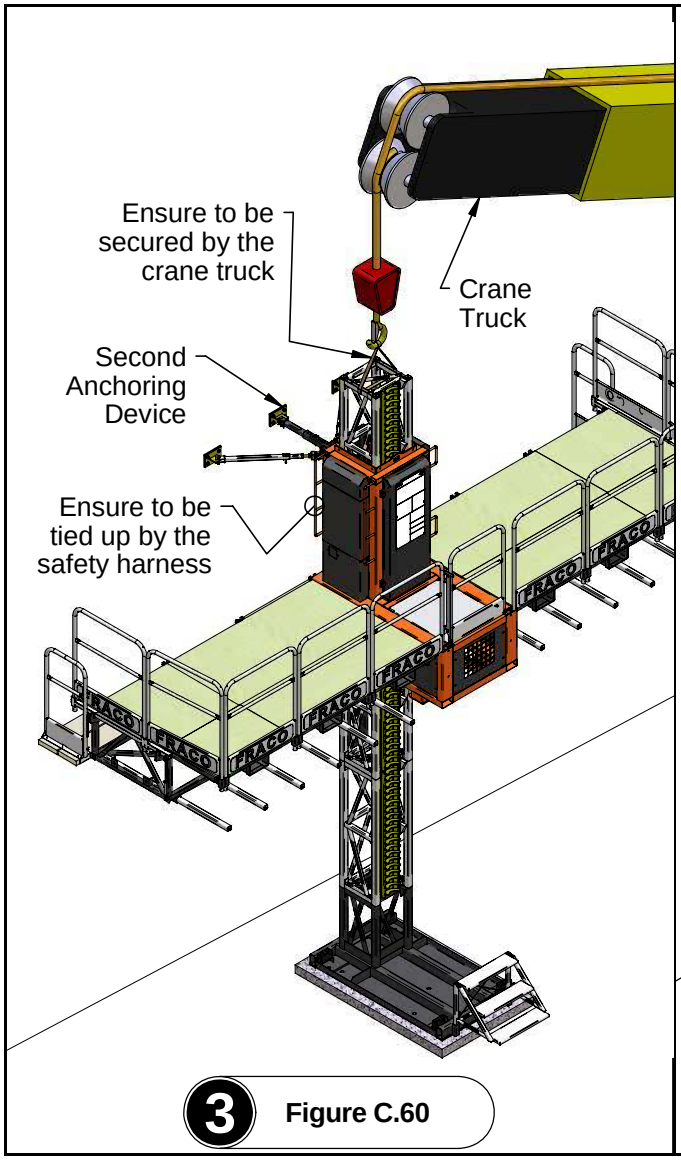
Dismantling Anchoring Devices with Ground Base (continued)

Step 3 (see Figure C.60)

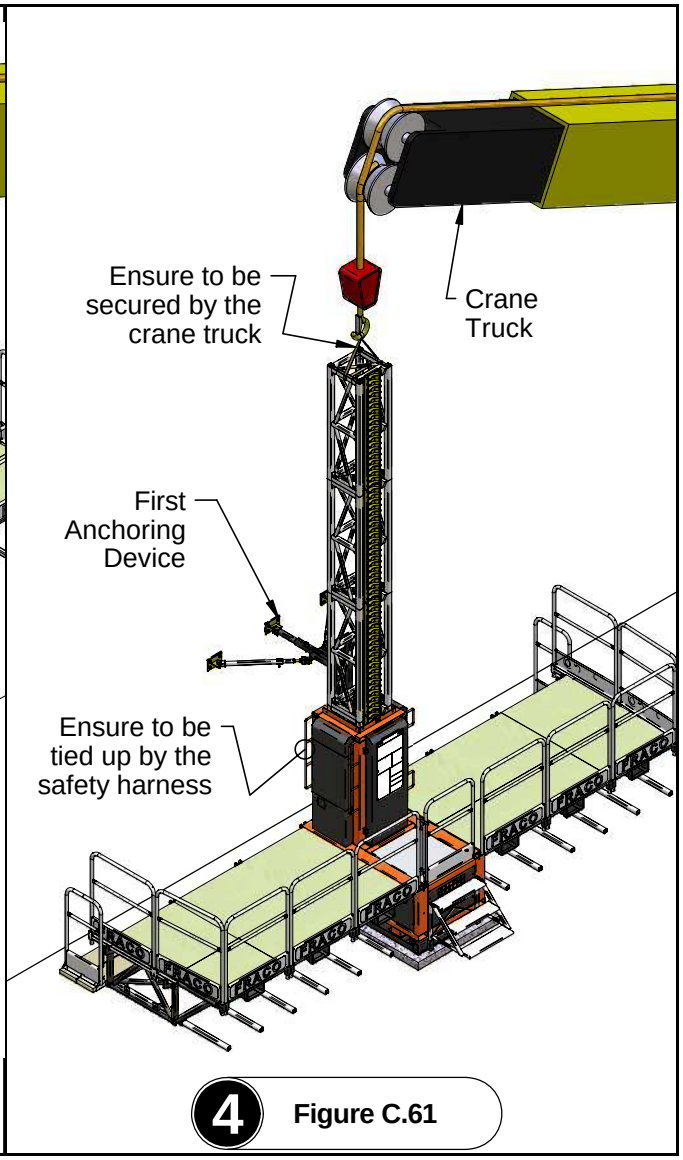
- When you get to the second anchoring device lower the platform to the ground.
- Remove the cantilever sections and keep the 3,0 m cantilever section or less, on each side of the elevating unit.
- Reinstall the plank-end guardrails, plank-ties, guardrails, guardrails pockets support and planks on the cantilever sections (see Chapter E).
- Ensure to be secured by the crane truck.
- Raise the elevating unit below the second anchoring device and place the planks and plank-ties on the anchor place.
- Remove the second anchoring device and perform the necessary repairs to the wall.

Step 4 (see Figure C.61)

- Lower the elevating unit below the first anchoring device and place the planks and plank-ties on the anchor space.
- Ensure to be secured by the crane truck.
- Removes the first anchoring device and perform the necessary repairs to the wall.
- Lower the elevating unit to the ground.



3 Figure C.60

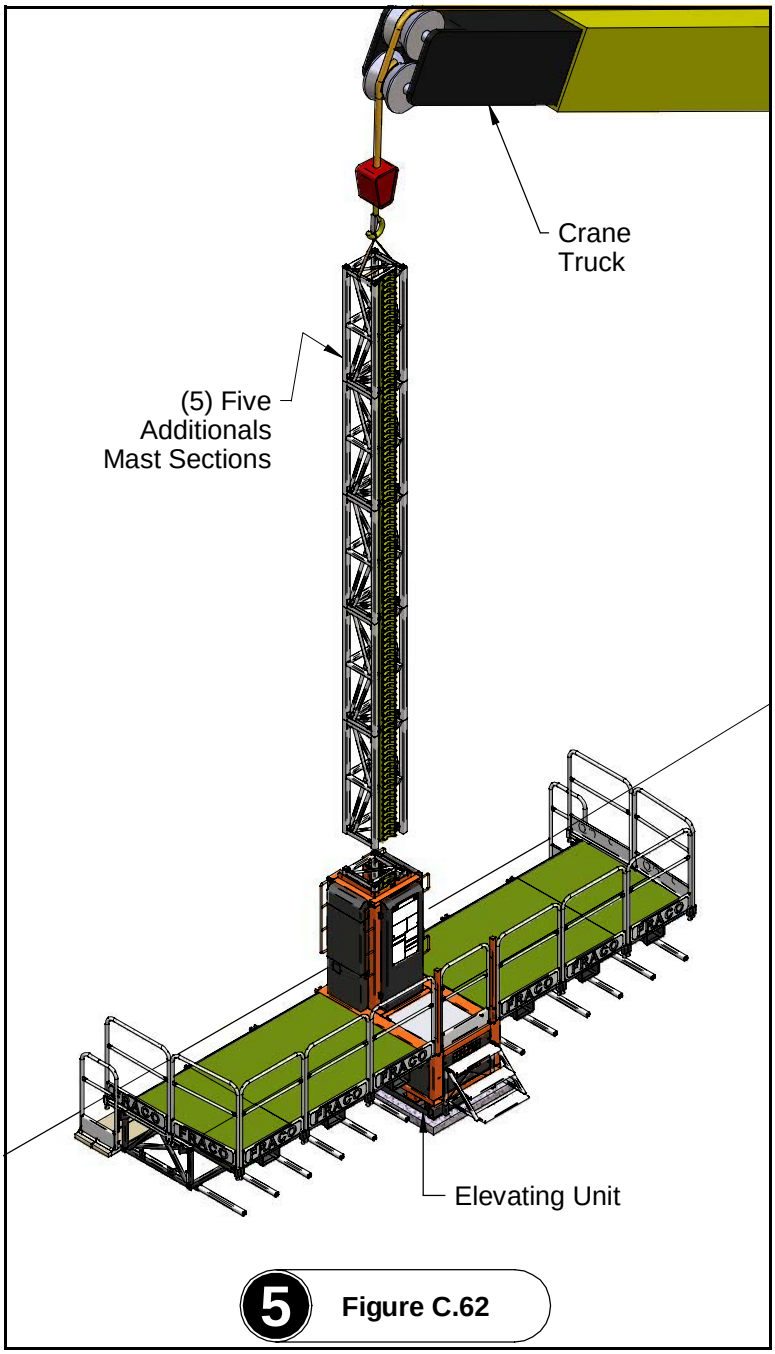


4 Figure C.61

Dismantling Anchoring Devices with Ground Base (continued)

Step 5 (see Figure C.62)

- Unbolt and remove (5) five mast sections and place them on the ground.
- Unbolt and remove (5) five mast sections from each other.
- Remove the planks, plank-end guardrails, plank-ties, cantilever sections, bridge sections (if is bridge configuration).



Dismantling Anchoring Devices with Freestanding Base

Step 1 et 2 (see page C.25)

Step 3 (see Figure C.63)

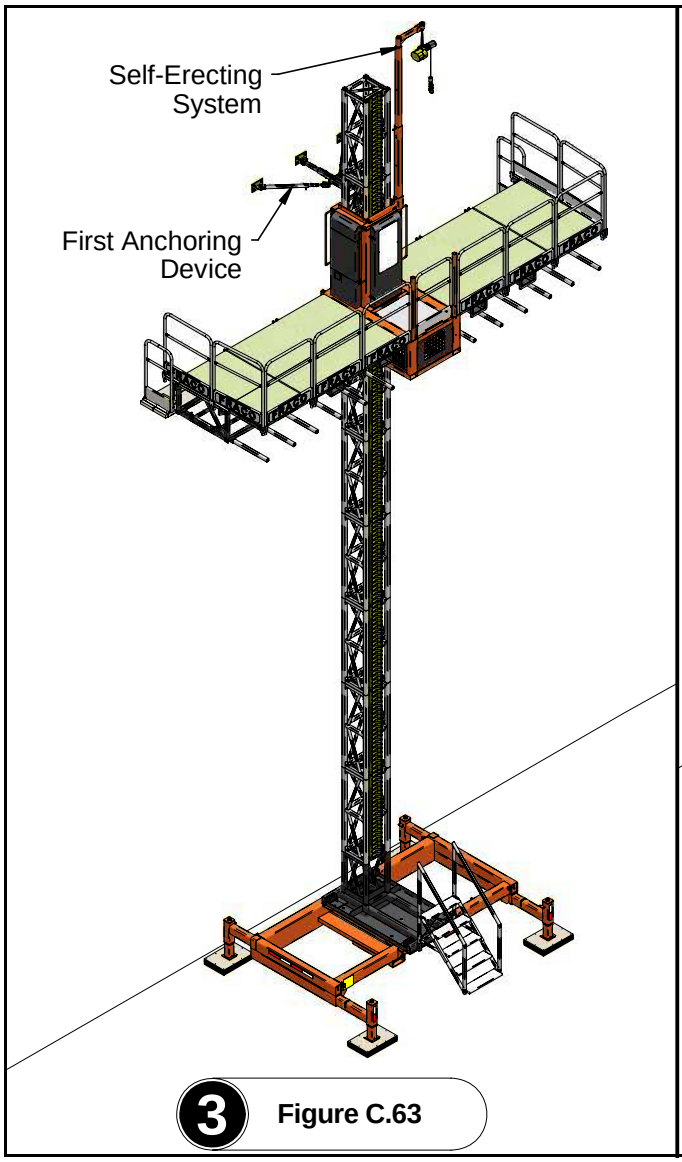
- When you get to the first anchoring device, dismantle the first anchoring device and perform the necessary repairs to the wall.

Step 4a (see Figure C.64) (self-erecting system)

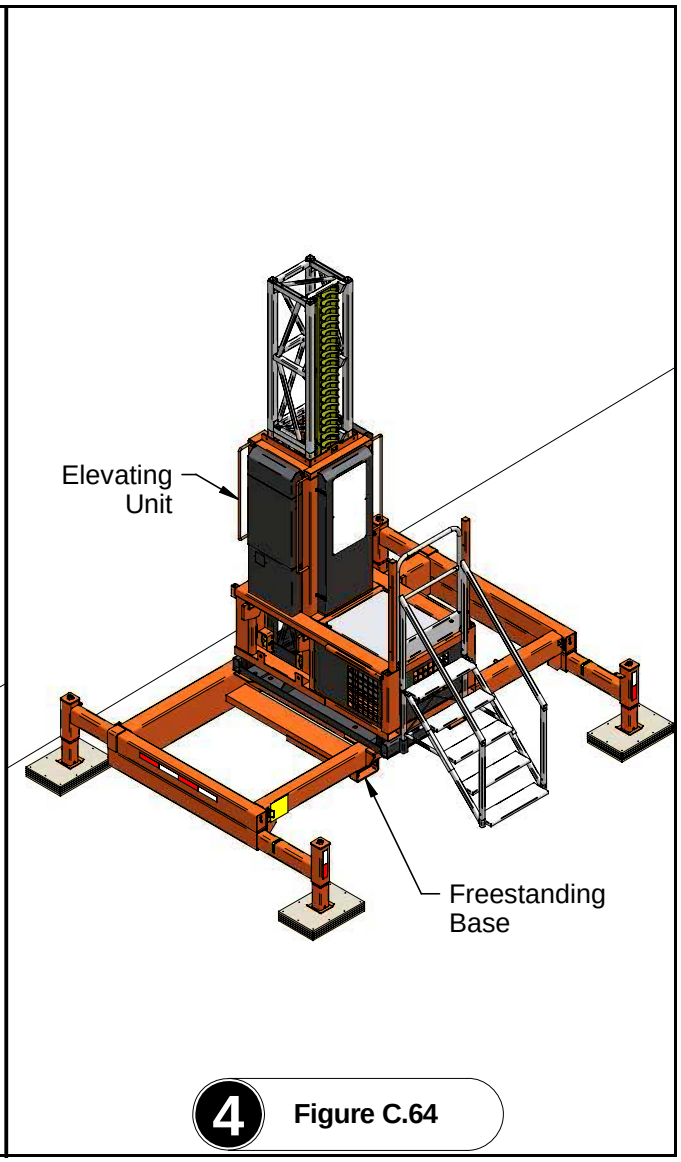
- Unbolt and remove the mast sections with the self-erecting system until reaching the last (2) two mast sections.
- Let the platform at 1,2 m from the ground.
- Remove the cantilever sections, guardrails, guardrail pockets supports, planks, plank-ties, plank-end guardrails, outriggers and bridge sections (if is bridge configuration).
- Slack bolt from the ground base with impact wrench and leave them in place.
- Lower the elevating unit to the ground.
- Unbolt and remove the mast section from the last mast section with the help of self-erecting system or fork lift.
- Remove self-erecting system.
- Unbolt and remove the elevating unit from the freestanding base.

Step 4b (see Figure C.64) (crane truck)

- Let the platform at 1,2 m from the ground.
- Unbolt and remove the mast sections with the crane truck until reaching the last (2) two mast sections and put them on the ground.
- Remove the cantilever sections, guardrails, guardrail pockets supports, planks, plank-ties, plank-end guardrails, outriggers and bridge sections (if is bridge configuration).
- Slack bolt from the ground base with impact wrench and leave them in place.
- Lower the elevating unit to the ground.
- Unbolt and remove the mast section from the last mast section with the fork lift.
- Unbolt and remove the elevating unit from the freestanding base.



3 **Figure C.63**



4 **Figure C.64**

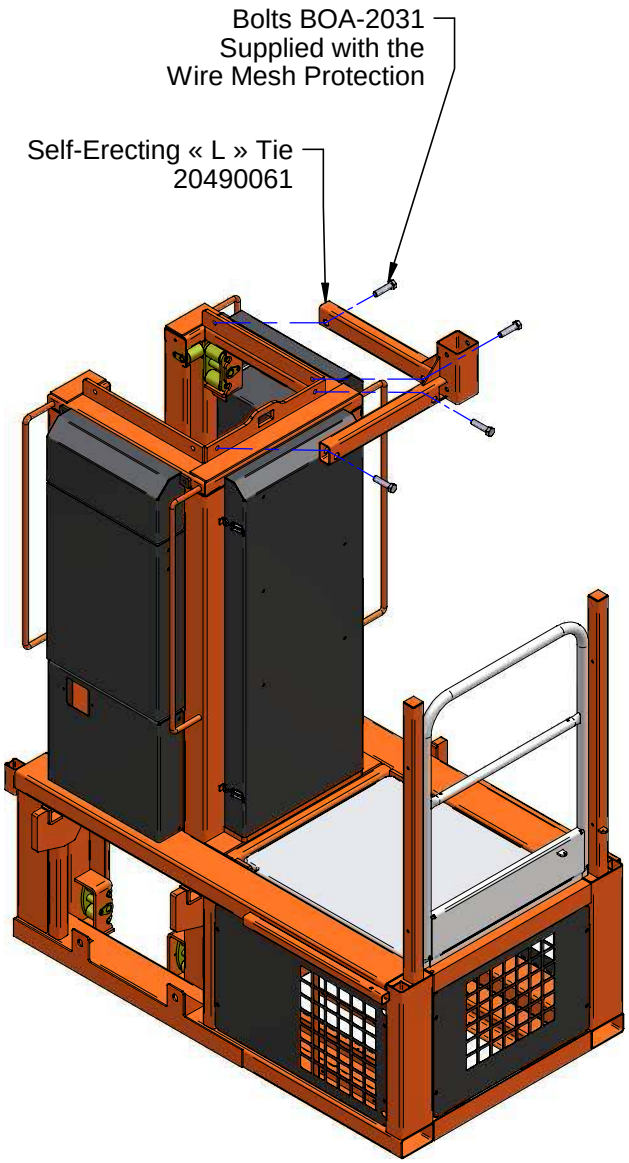
Installing Self-Erecting System (optional)

Step 1 (see Figure C.65)

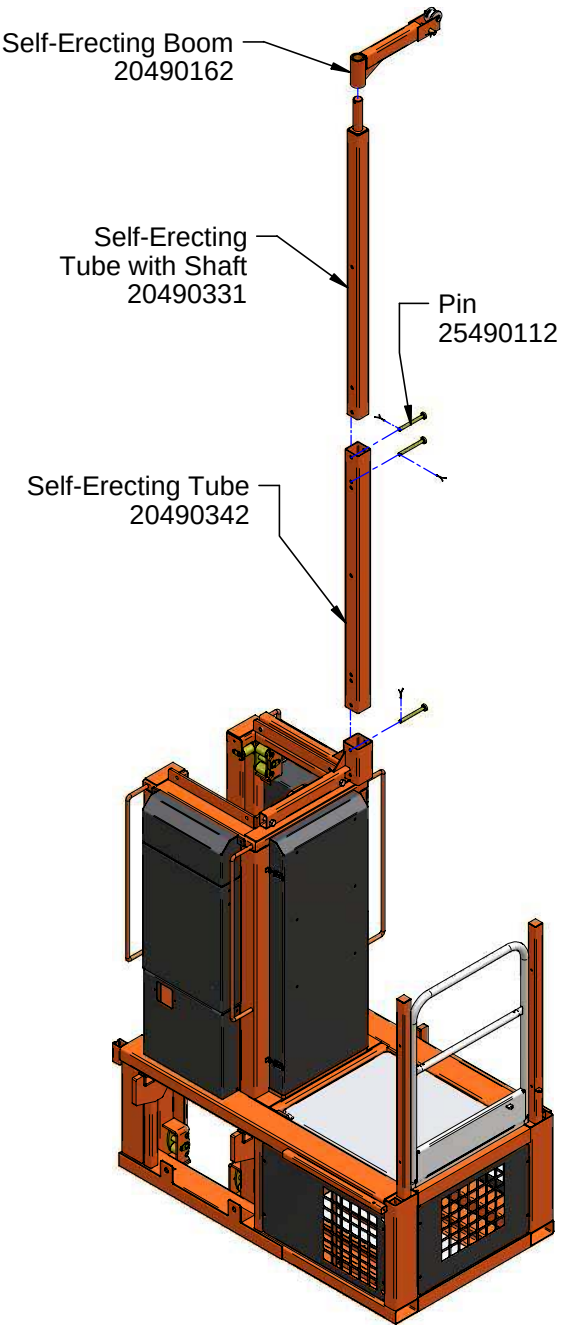
- Place and bolt the self erecting « L » tie onto the elevating unit, using the bolts supplied with the self erecting system.

Step 2 (see Figure C.66)

- Place and secure the self erecting tube using pins.
- Place and secure the self erecting tube with shaft using pins.
- Place the self erecting boom on the self erecting tube with shaft.



1 **Figure C.65**

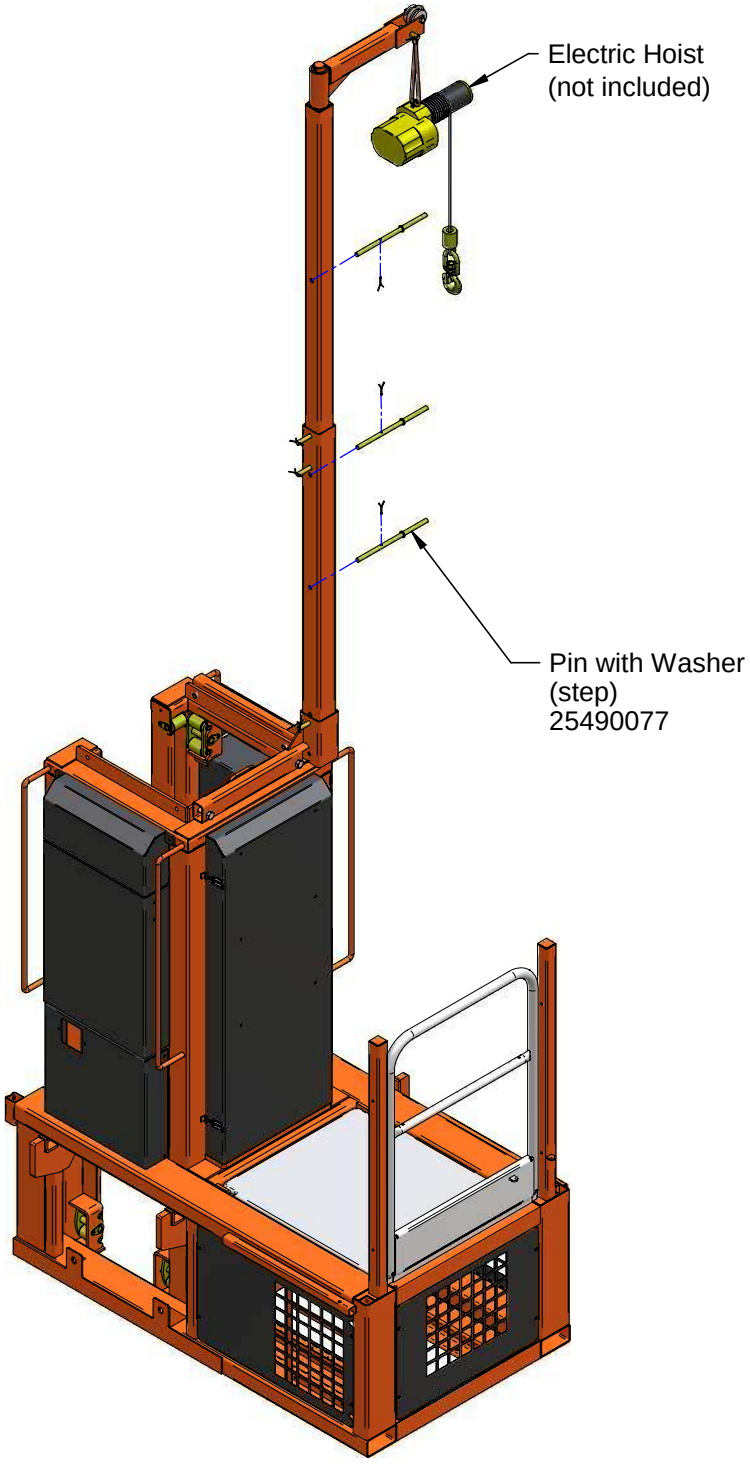


2 **Figure C.66**

Installing Self-Erecting System (optional) (continued)

Step 3 (see Figure C.67)

- Place and secure the pins with washers using cotter pins (the pins with washers are used as steps). This will allow the installation of the electric hoist.
- Once the electric hoist is installed, remove the pins with washers (steps).
- The pins with washers must be reinstalled during the dismantling of the self erecting system.



3 **Figure C.67**

Installing End of Range Detectors (optional for electric and diesel version)

- When the installation of the mast is completed, position the bottom end of range detector about 1 270 mm from the base on the ground. (to be adjusted at the work site) (see figure C.68).
- Position the extreme bottom end of range detector at 150 mm below the bottom end of range detector (see Figure C.68).
- Position the top end of range detector on the last mast section (to be adjusted on the work site) (see Figure C.68).
- Position the extreme bottom [probably an error for top in source] end of range detector at 150 mm above the top end of range detector (see Figure C.68).

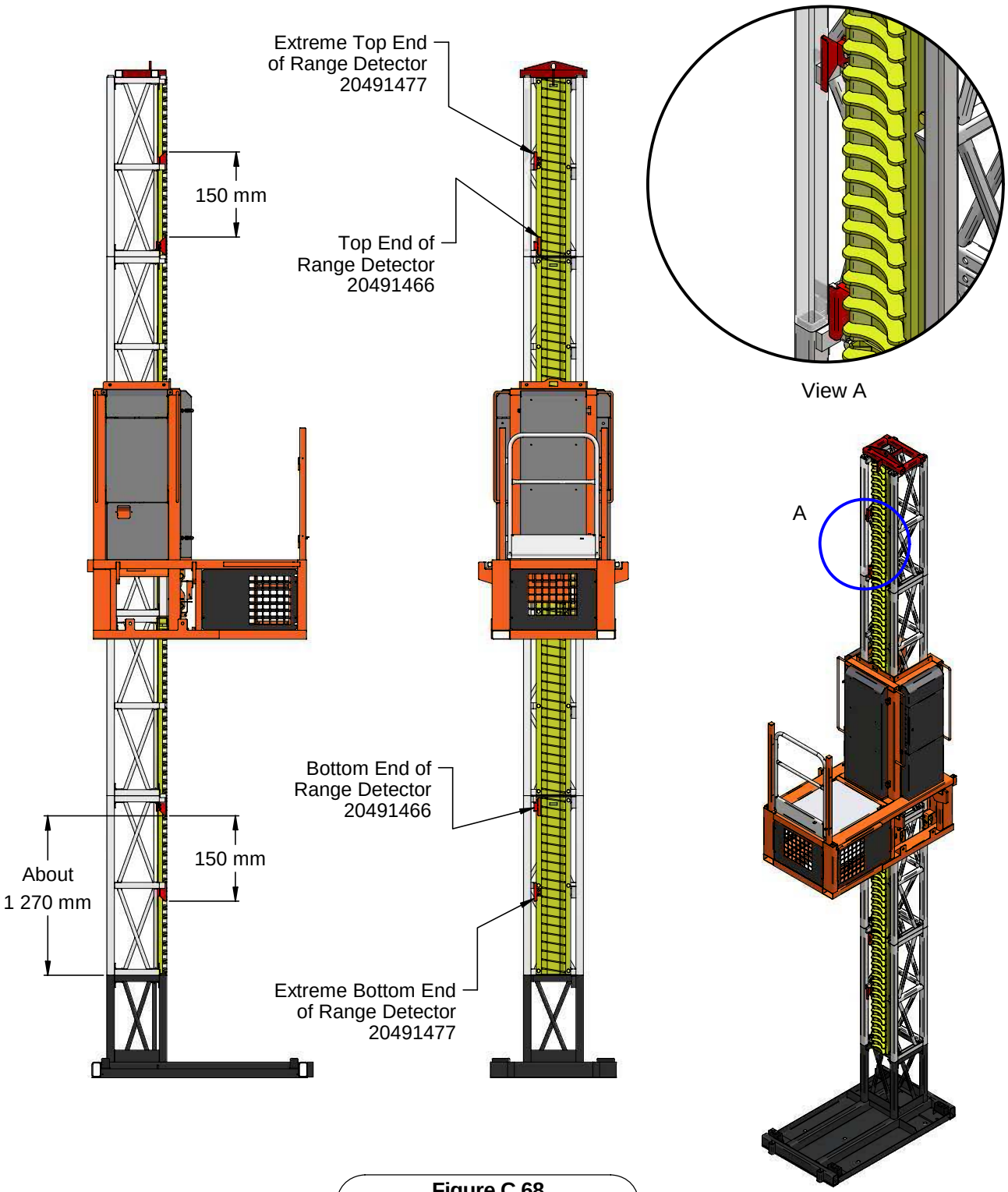
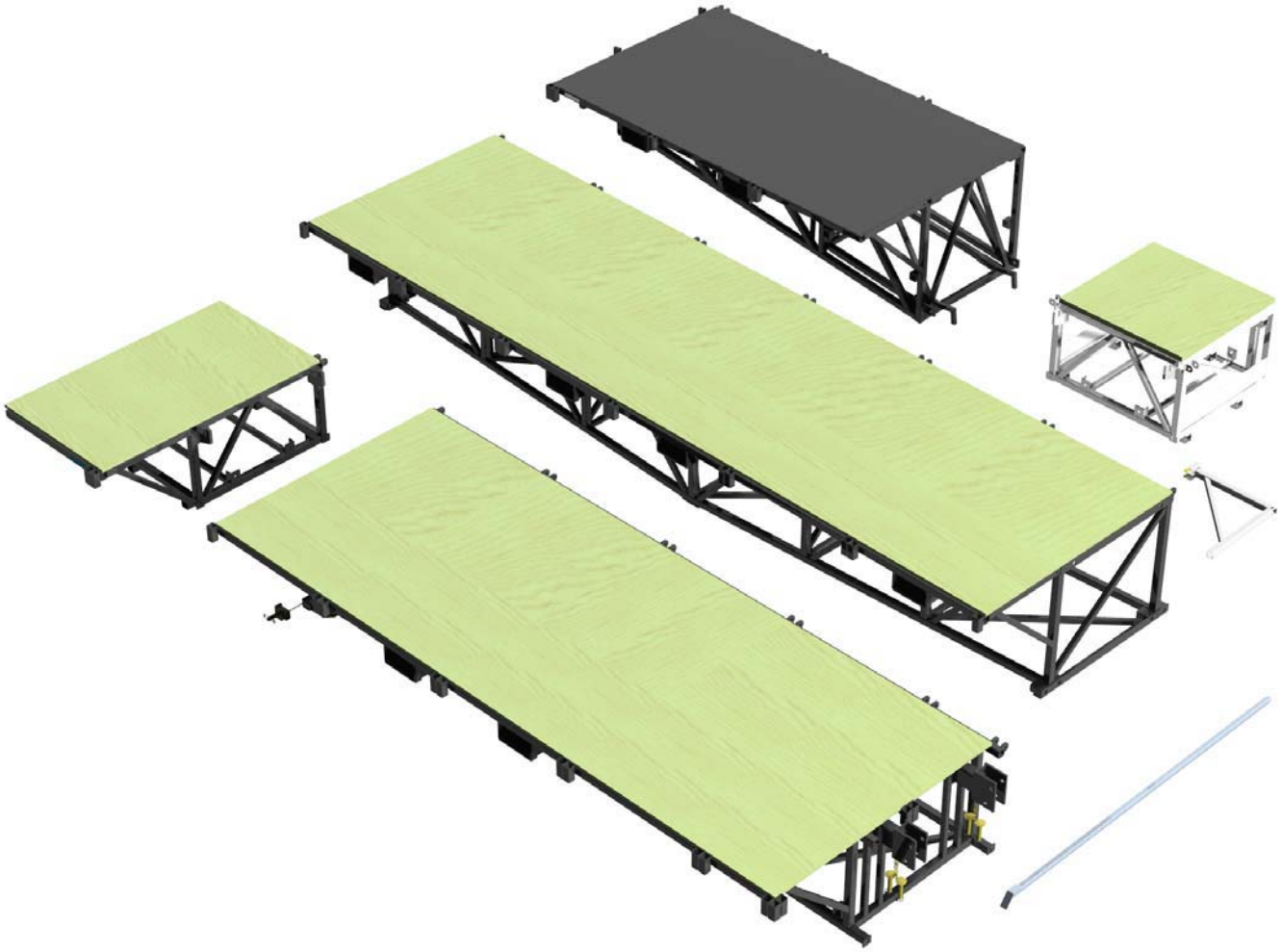


Figure C.68
End of Range Detector



CHAPTER D

Bridge Sections and Cantilever Sections

- Data Sheet of Modular Cantilever Sections D-2
- Data Sheet of Non-Modular Cantilever Sections D-3
- Data Sheet of Modular Bridge Sections D-4
- Data Sheet of Non-Modular Bridge Sections D-5
- Installation of Bridge Sections D-6
- Installation of Intermediate Cantilever Sections D-10
- Installation of Modular Cantilever Sections D-11
- Installation of Non-Modular Cantilever Sections D-12
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- Installing the Bridge Section D-15
- Distance Between Mast D-17
- Installation of Inclinometer D-19
- Installation of Modular Bridge Joint D-20

DATA SHEET OF MODULAR CANTILEVER SECTIONS

Intermediate Cantilever Section of 2'-6" x 5'-9" (762 mm x 1,75 m) (15030087 and 15030010)	**Imperial**	**Metric**
Weight	305 lb	140 kg
Length (see Figure D.1)	2'-6"	762 mm
Width (see Figure D.1)	5'-9"	1,75 m
Height (see Figure D.1)	2'-3"	673 mm
Cantilever Section of 3'-4" x 5'-9" (1,0 m x 1,75 m) (15030098 and 15030021)	**Imperial**	**Metric**
Weight	285 lb	130 kg
Length (see Figure D.1)	3'-4"	1,00 m
Width (see Figure D.1)	5'-9"	1,75 m
Height (see Figure D.1)	2'-3"	673 mm
Intermediate Cantilever Section of 5'-0" x 5'-9" (1,52 m x 1,75 m) (15030188 and 15030199)	**Imperial**	**Metric**
Weight	525 lb	240 kg
Length (see Figure D.1)	5'-0"	1,52 m
Width (see Figure D.1)	5'-9"	1,75 m
Height (see Figure D.1)	2'-3"	673 mm
Cantilever Section of 6'-8" x 5'-9" (2,0 m x 1,75 m) (15030100 and 15030032)	**Imperial**	**Metric**
Weight	595 lb	270 kg
Length (see Figure D.1)	6'-8"	2,00 m
Width (see Figure D.1)	5'-9"	1,75 m
Height (see Figure D.1)	2'-3"	673 mm
Cantilever Section of 10'-0" x 5'-9" (3,0 m x 1,75 m) (15030111 and 15030043)	**Imperial**	**Metric**
Weight	830 lb	375 kg
Length (see Figure D.1)	10'-0"	3,00 m
Width (see Figure D.1)	5'-9"	1,75 m
Height (see Figure D.1)	2'-3"	673 mm
Taper Cantilever Section of 10'-0" x 5'-9" (3,0 m x 1,75 m) (15060013 and 15060024)	**Imperial**	**Metric**
Weight	1 215 lb	550 kg
Length (see Figure D.2)	10'-0"	3,00 m
Width (see Figure D.2)	5'-9"	1,75 m
Height 1 / Height 2 (see Figure D.2)	2'-1" / 3'-4"	622 mm / 1,00 m

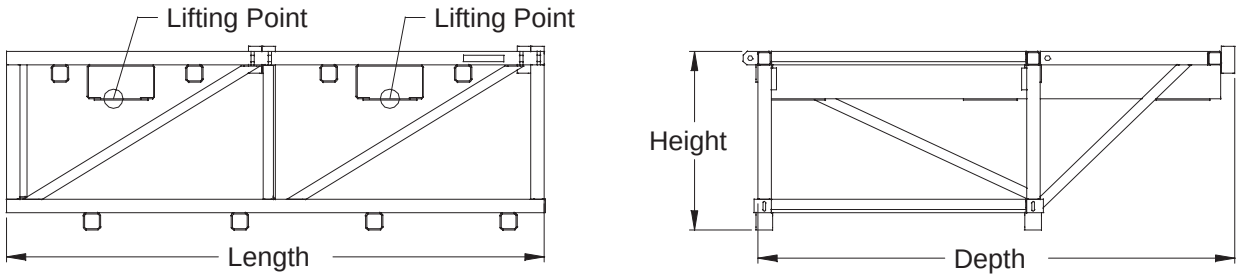


Figure D.1
Dimensions of Modulars Cantilever Section

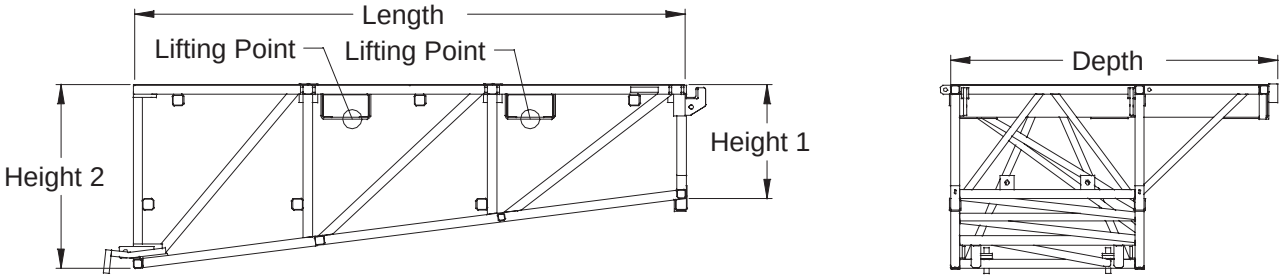


Figure D.2
Dimensions of Modulars Tapper Cantilever Section

DATA SHEET OF NON-MODULAR CANTILEVER SECTIONS

Cantilever Section of 2'-6" x 3'-6" (762 mm x 1,07 m) (15020019)	**Imperial**	**Metric**
Weight	300 lb	135 kg
Length (see Figure D.3)	2'-6"	762 mm
Width (see Figure D.3)	3'-6"	1,07 m
Height (see Figure D.3)	2'-3"	673 mm
Cantilever Section of 3'-4" x 3'-6" (1,0 m x 1,07 m) (15020020)	**Imperial**	**Metric**
Weight	275 lb	125 kg
Length (see Figure D.3)	3'-4"	1,00 m
Width (see Figure D.3)	3'-6"	1,07 m
Height (see Figure D.3)	2'-3"	673 mm
Cantilever Section of 6'-8" x 3'-6" (2,0 m x 1,07 m) (15020031)	**Imperial**	**Metric**
Weight	455 lb	205 kg
Length (see Figure D.3)	6'-8"	2,00 m
Width (see Figure D.3)	3'-6"	1,07 m
Height (see Figure D.3)	2'-3"	673 mm
Cantilever Section of 10'-0" x 3'-6" (3,0 m x 1,07 m) (15020042)	**Imperial**	**Metric**
Weight	640 lb	290 kg
Length (see Figure D.3)	10'-0"	3,00 m
Width (see Figure D.3)	3'-6"	1,07 m
Height (see Figure D.3)	2'-3"	673 mm
Taper Cantilever Section of 10'-0" x 3'-6" (3,0 m x 1,07 m) (15020086)	**Imperial**	**Metric**
Weight	1 000 lb	455 kg
Length (see Figure D.4)	10'-0"	3,00 m
Width (see Figure D.4)	3'-6"	1,07 m
Height 1 / Height 2 (see Figure D.4)	2'-1" / 3'-4"	622 mm / 1,00 m

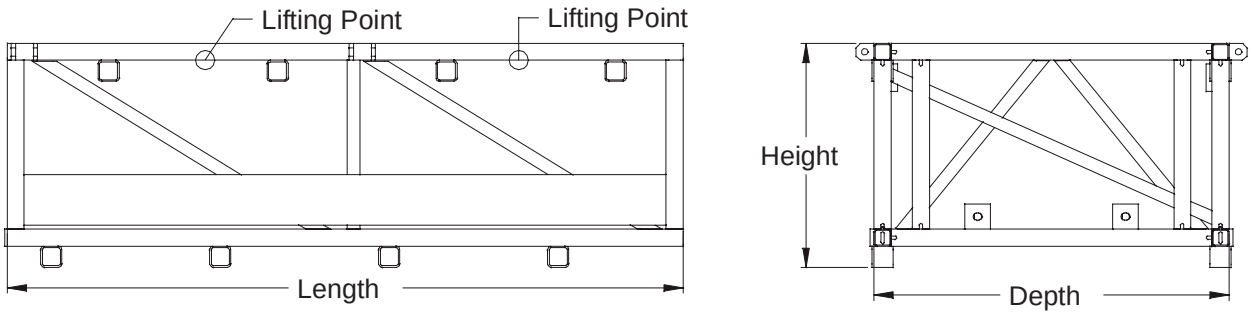


Figure D.3
Dimensions of Non-Modulars Cantilever Section

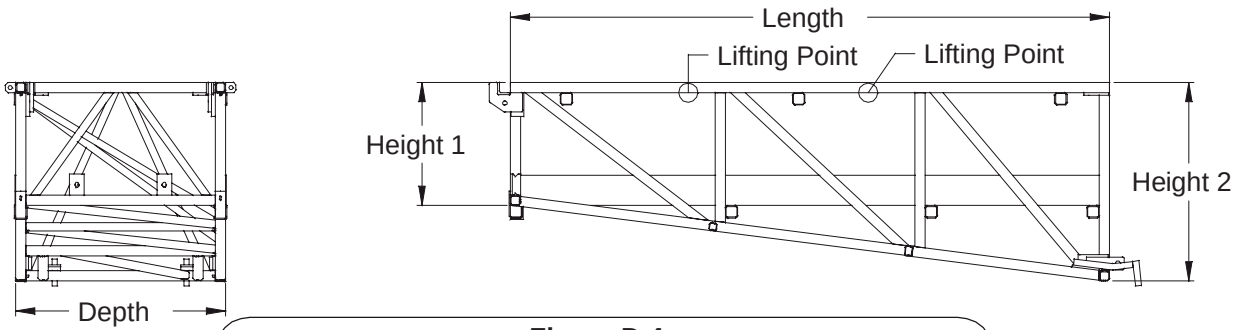


Figure D.4
Dimensions of Non-Modulars Tapper Cantilever Section

DATA SHEET OF MODULAR BRIDGE SECTIONS

Bridge Section of 15'-0" x 5'-9" (4,57 m x 1,75 m) (15030166 and 15030177)	**Imperial**	**Metric**
Weight	1 290 lb	585 kg
Length (see Figure D.5)	15'-0"	4,57 m
Width (see Figure D.5)	5'-9"	1,75 m
Height 1 / Height 2 (see Figure D.5)	2'-6" / 3'-2"	762 mm / 953 mm
Bridge Section of 20'-0" x 5'-9" (6,1 m x 1,75 m) (15030144 and 15030155)	**Imperial**	**Metric**
Weight	1 690 lb	770 kg
Length (see Figure D.5)	20'-0"	6,10 m
Width (see Figure D.5)	5'-9"	1,75 m
Height 1 / Height 2 (see Figure D.5)	2'-6" / 3'-2"	762 mm / 953 mm
Center Bridge Section of 20'-0" x 5'-9" (6,1 m x 1,75 m) (15030076)	**Imperial**	**Metric**
Weight	1 660 lb	750 kg
Length (see Figure D.6)	20'-0"	6,10 m
Width (see Figure D.6)	5'-9"	1,75 m
Height 1 / Height 2 (see Figure D.6)	3'-2" / 3'-9"	953 mm / 1,14 m

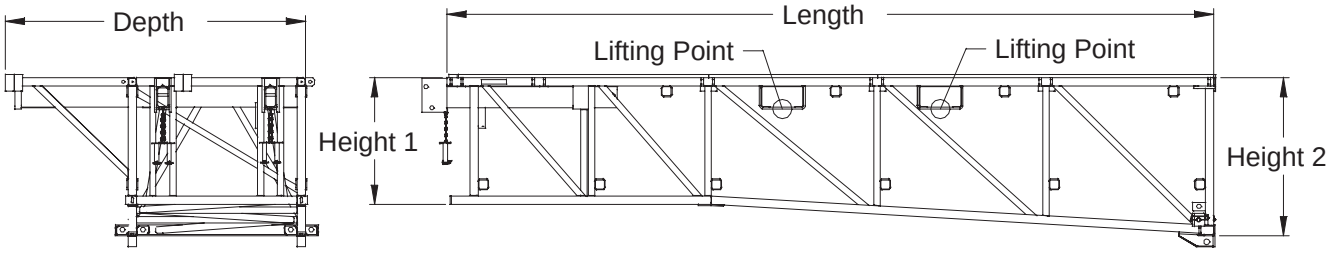


Figure D.5
Dimensions of Modular Bridge Section

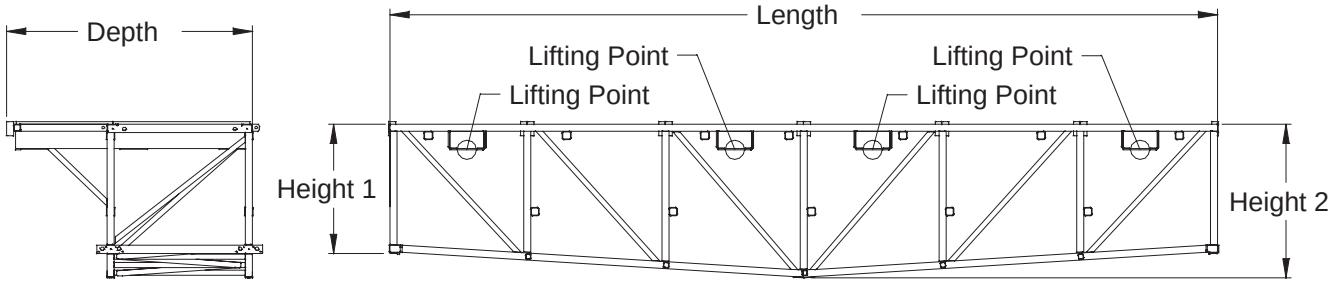


Figure D.6
Dimensions of Modular Central Bridge Section

DATA SHEET OF NON-MODULAR BRIDGE SECTIONS

Bridge Section of 15'-0" x 3'-6" (4,57 m x 1,07 m) (15020097)	**Imperial**	**Metric**
Weight	1 200 lb	545 kg
Length (see Figure D.7)	15'-0"	4,57 m
Width (see Figure D.7)	3'-6"	1,07 m
Height 1 / Height 2 (see Figure D.7)	2'-6" / 3'-2"	762 mm / 953 mm
Bridge Section of 20'-0" x 3'-6" (6,1 m x 1,07 m) (15020109)	**Imperial**	**Metric**
Weight	1 425 lb	645 kg
Length (see Figure D.7)	20'-0"	6,10 m
Width (see Figure D.7)	3'-6"	1,07 m
Height 1 / Height 2 (see Figure D.7)	2'-6" / 3'-2"	762 mm / 953 mm
Center Bridge Section of 20'-0" x 3'-6" (6,1 m x 1,07 m) (15020075)	**Imperial**	**Metric**
Weight	1 350 lb	615 kg
Length (see Figure D.8)	20'-0"	6,10 m
Width (see Figure D.8)	3'-6"	1,07 m
Height 1 / Height 2 (see Figure D.8)	3'-2" / 3'-9"	953 mm / 1,1 m

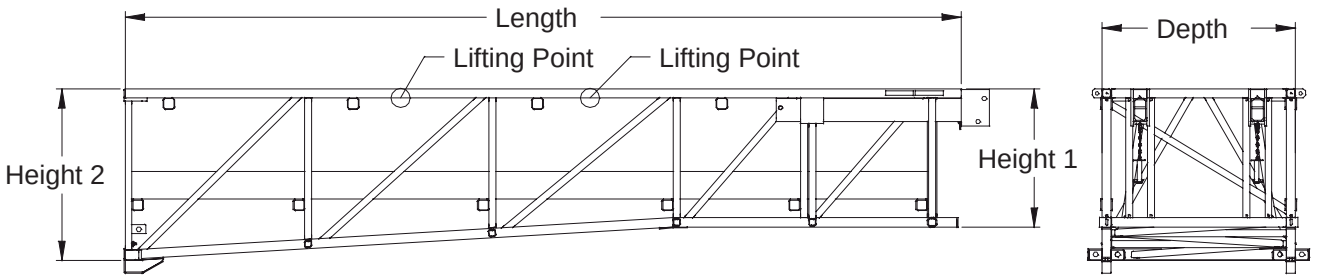


Figure D.7
Dimensions of Non-Modular Bridge Section

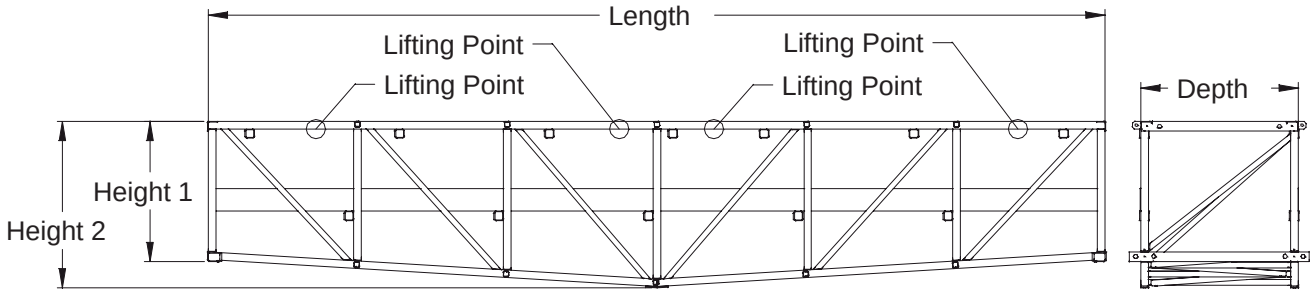


Figure D.8
Dimensions of Non-Modular Central Bridge Section

INSTALLATION OF BRIDGE SECTIONS

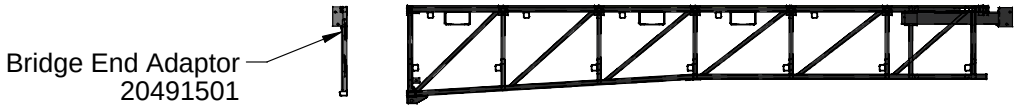
Step 1 (see Figure D.9)

1- Bolt the bridge sections together using four (4) bolts BOA-2085 at the bottom (see View B) and two (2) bolts BOA-2090 at the top. (see View A)

2- Place the pin with chain through the plate with holes.

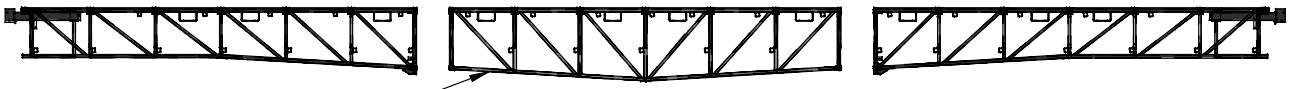
Note :

- The following three (3) drawings demonstrate the assembly of each bridge.

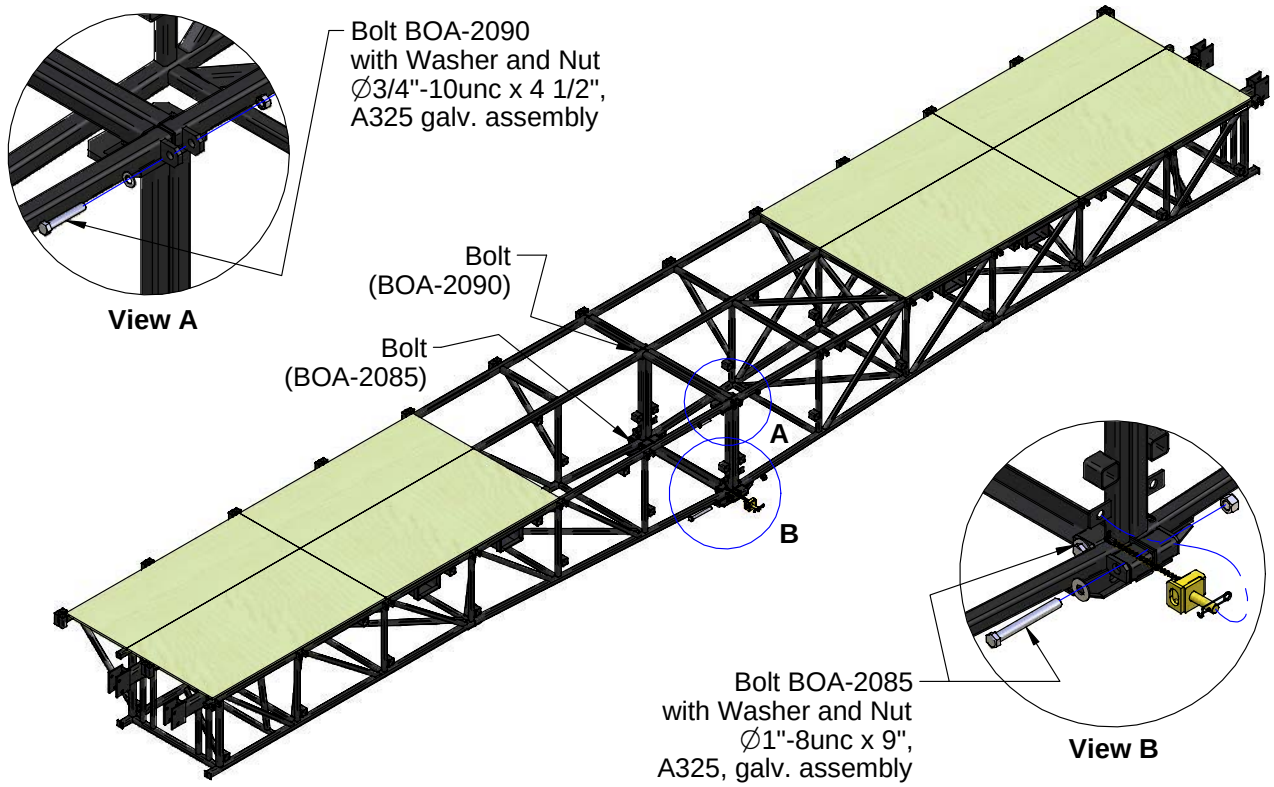


Assembly of 20'-0" (6,1 m) Bridge

Assembly of 40'-0" (12,2 m) Bridge



Assembly of 60'-0" (18,3 m) Bridge



View A

View B

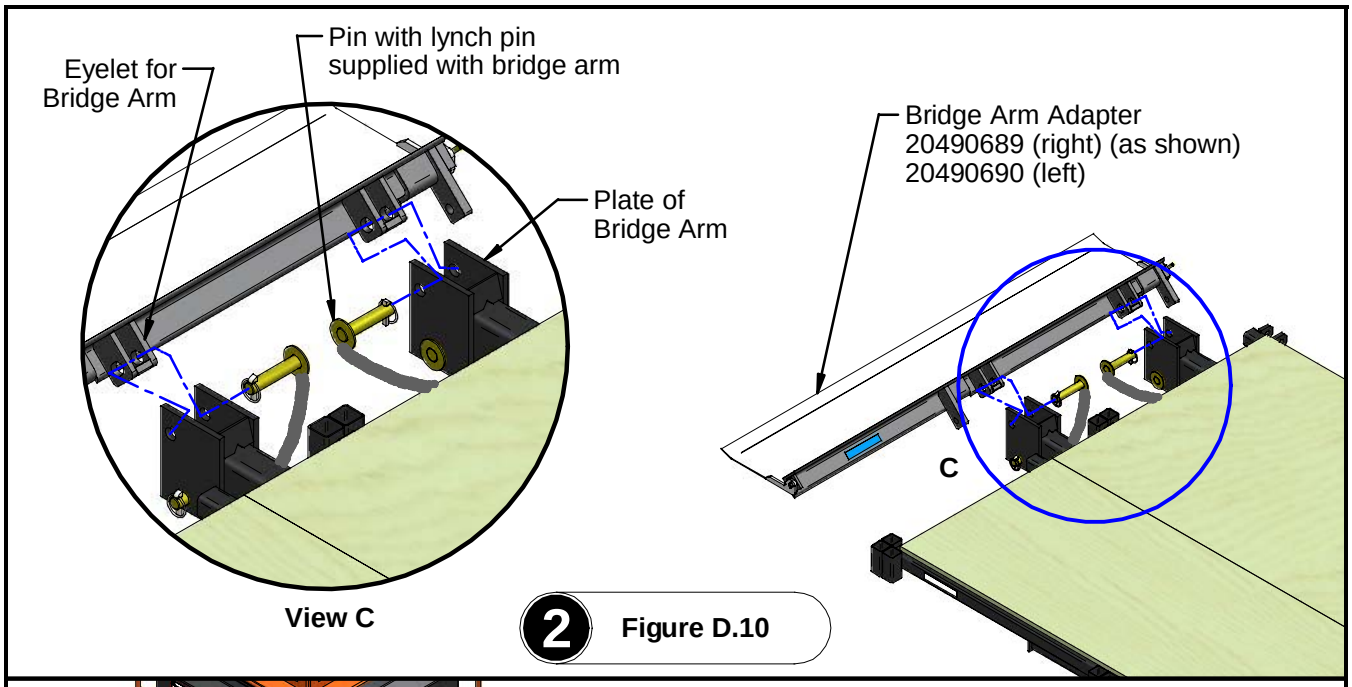
1 Figure D.9

Step 2 (see Figure D.10 and View C)

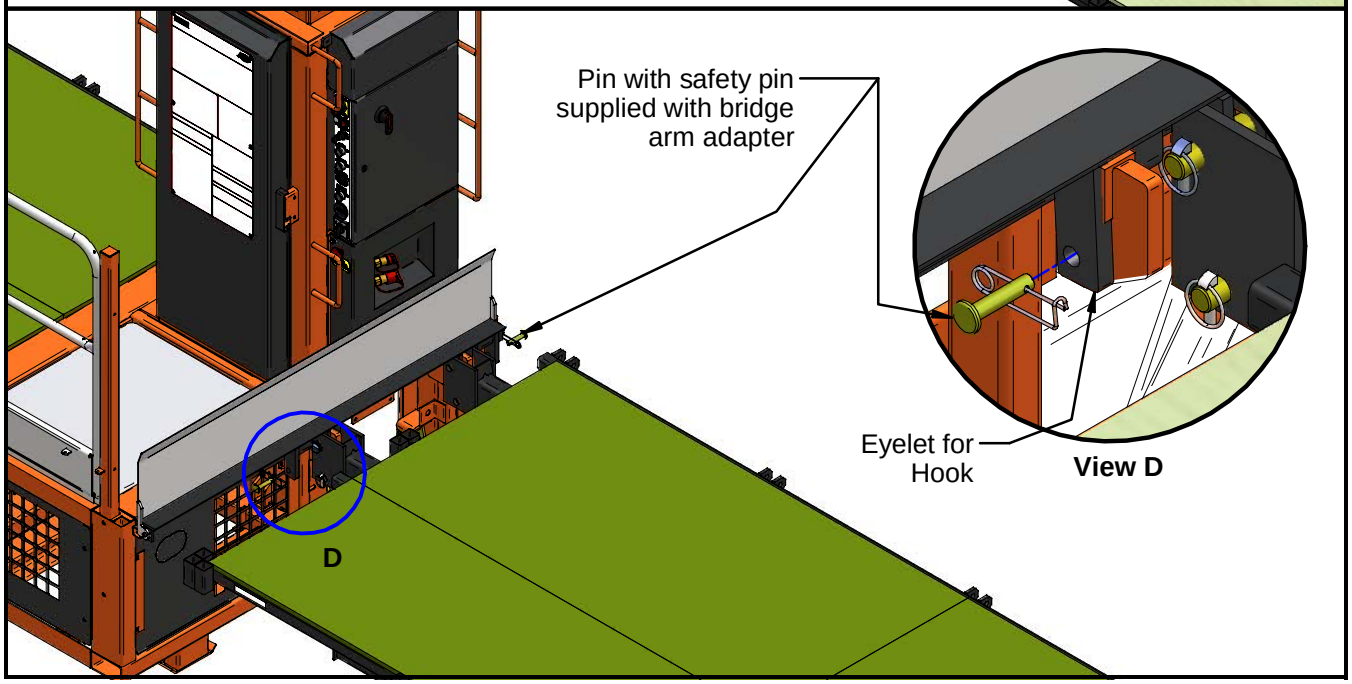
3- Install the eyelets for bridge arm into the plates of bridge arm.
4- Place the pins in the top hole from the bridge arm and block the pins with the lynch pin.
5- Place the other pins in the bottom hole of the bridge arm and block the pins with the lynch pin.

Step 3 (see Figure D.11 and View D)

6- Place the pins in every eyelets for hook and block the pins with the safety pin.



2 Figure D.10



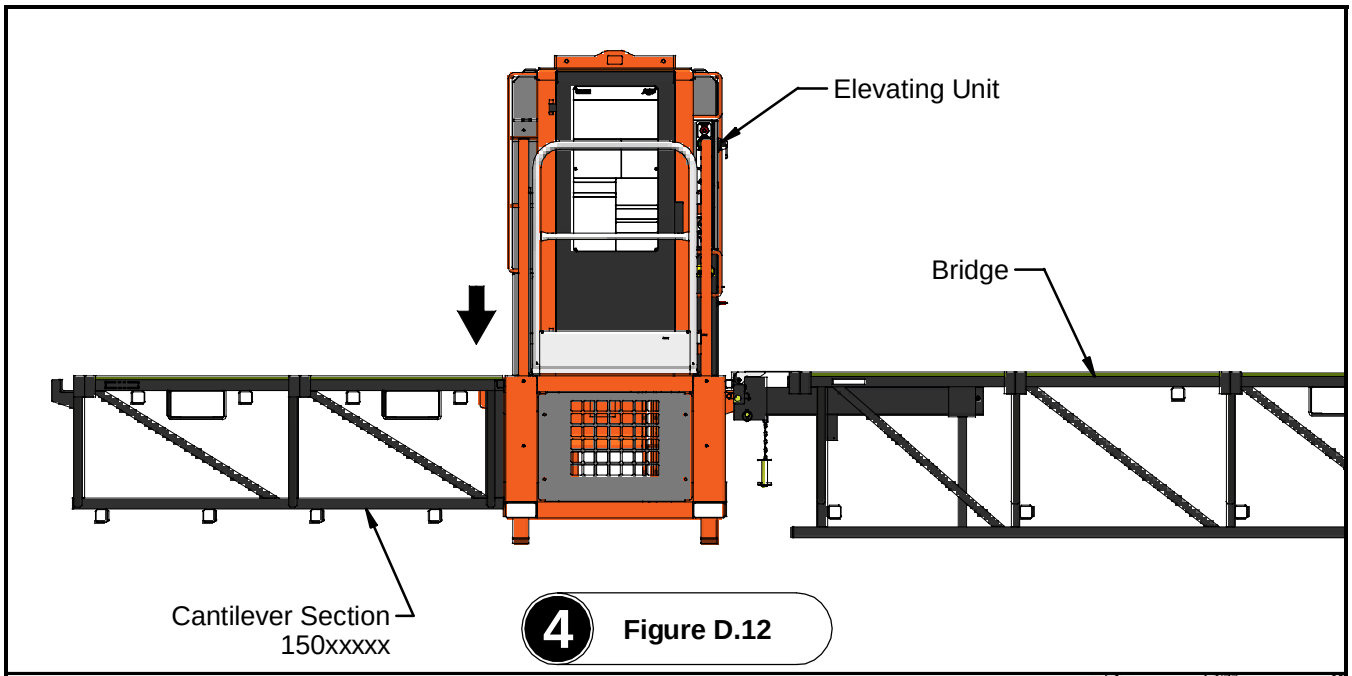
Step 4 (see Figure D.12)

1- Position and bolt the cantilever section to the opposite side of the bridge. (consult the pages D-10 to D-12 for more information)

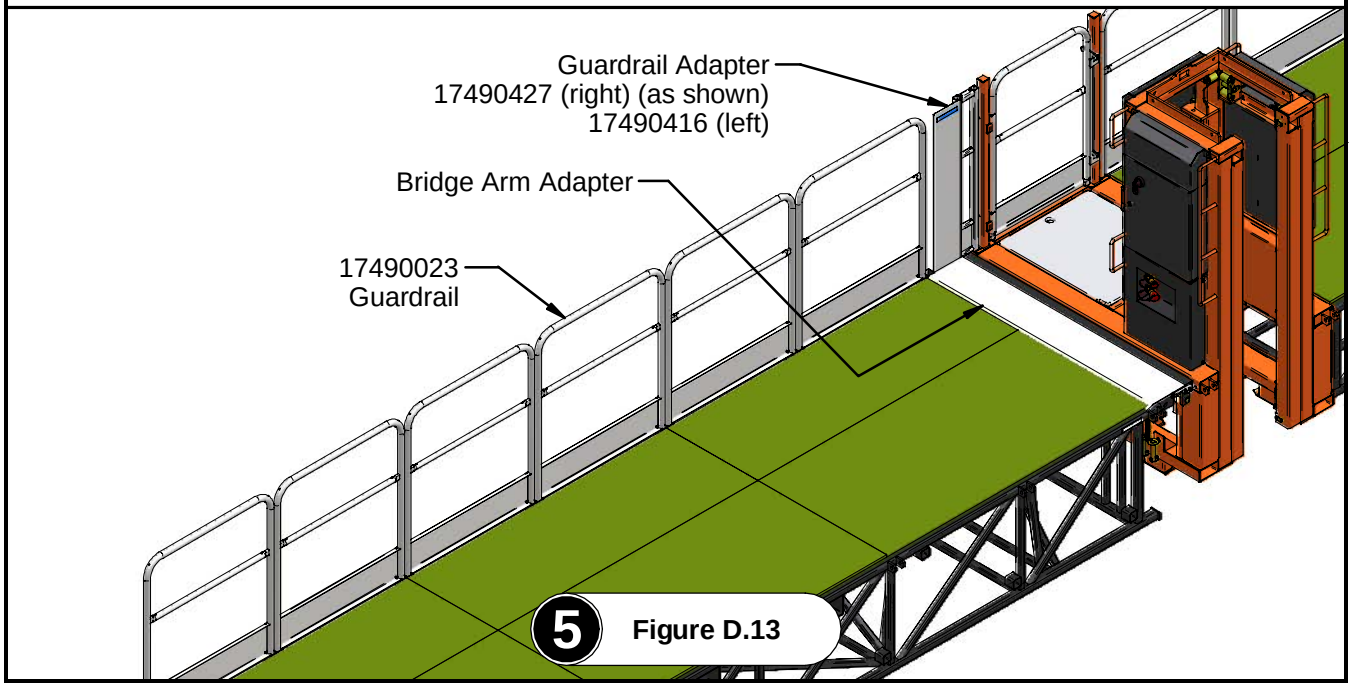
Step 5 (see Figure D.13)

2- Place all guardrails.

3- Place the guardrail adapter in the pocket of the elevating unit.



4 **Figure D.12**



5 **Figure D.13**

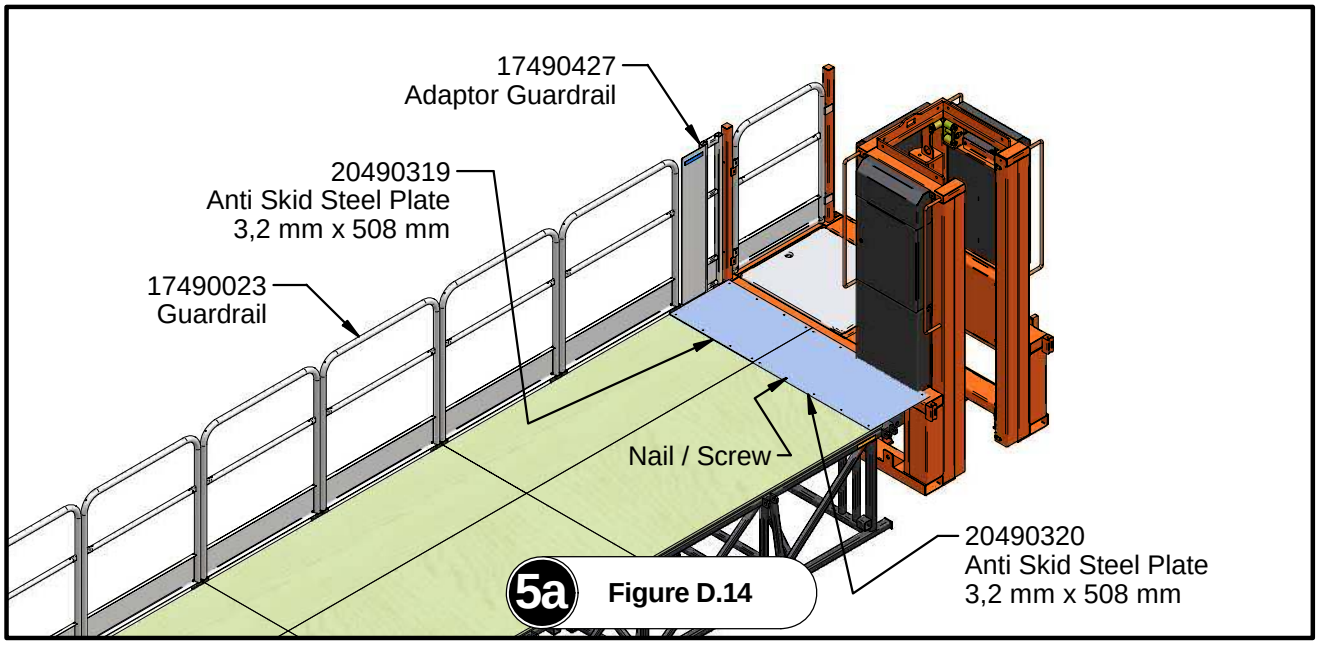
Step 5a (see Figure D.14) (on the elevating unit)

- Place all the guardrails.
- Place the covering guardrail in the elevating unit pocket.
- Nail or screw two anti-skid steel plates to cover the gap between the elevating unit and the bridge.

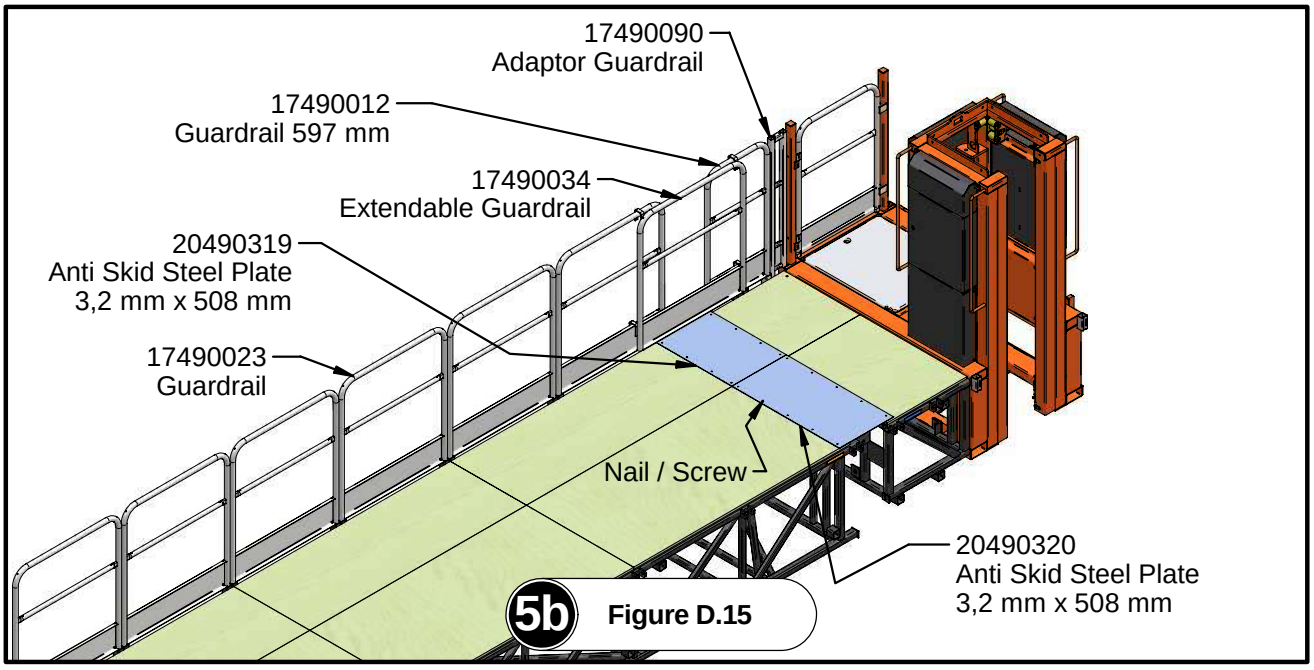
Step 5b (see Figure D.15) (on the 2’-6” (762 mm) cantilever section)

- Place all the guardrails.
- Place the covering guardrail in the elevating unit pocket.
- Nail or screw two anti-skid steel plates to cover the gap between the 2'-6" (0.8 m) cantilever section and the bridge.
- Place the guardrail (17490012) in the pockets of the guardrail (17490090).
- Place the extensible guardrail between the guardrail on the bridge and the guardrail (17490012).
- Secure the extensible guardrail with a safety pin.

INSTALLATION OF INTERMEDIATE CANTILEVER SECTIONS



5a **Figure D.14**



5b **Figure D.15**

Choice of Intermediate (see Figure D.14)

- For the installation on the elevating unit, see follow page for the installation of cantilever section.
- For the installation on the bridge section, insert the first pin in the top hole of the bridge arm.
- Drop the bridge arm on the hooks of the intermediate cantilever section.
- Insert the second pin in the bottom hole of the bridge arm.

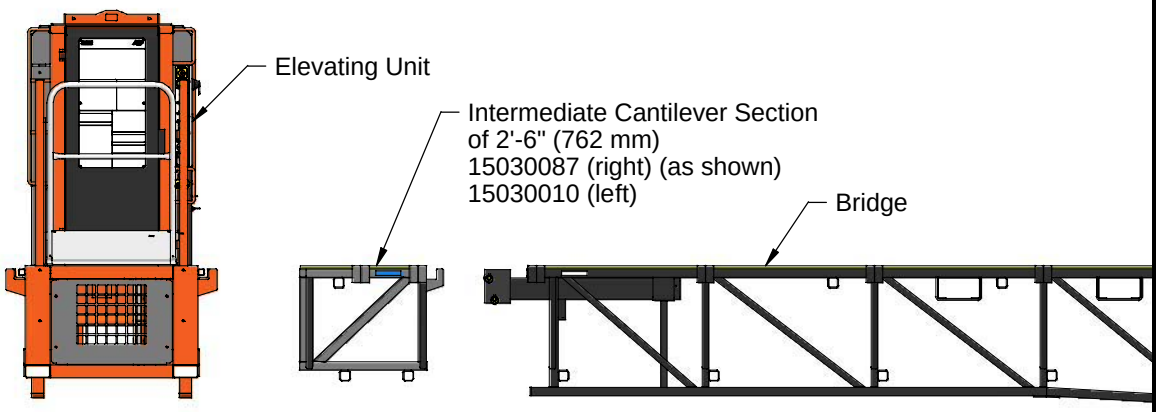


Figure D.16 Choice of Intermédiate

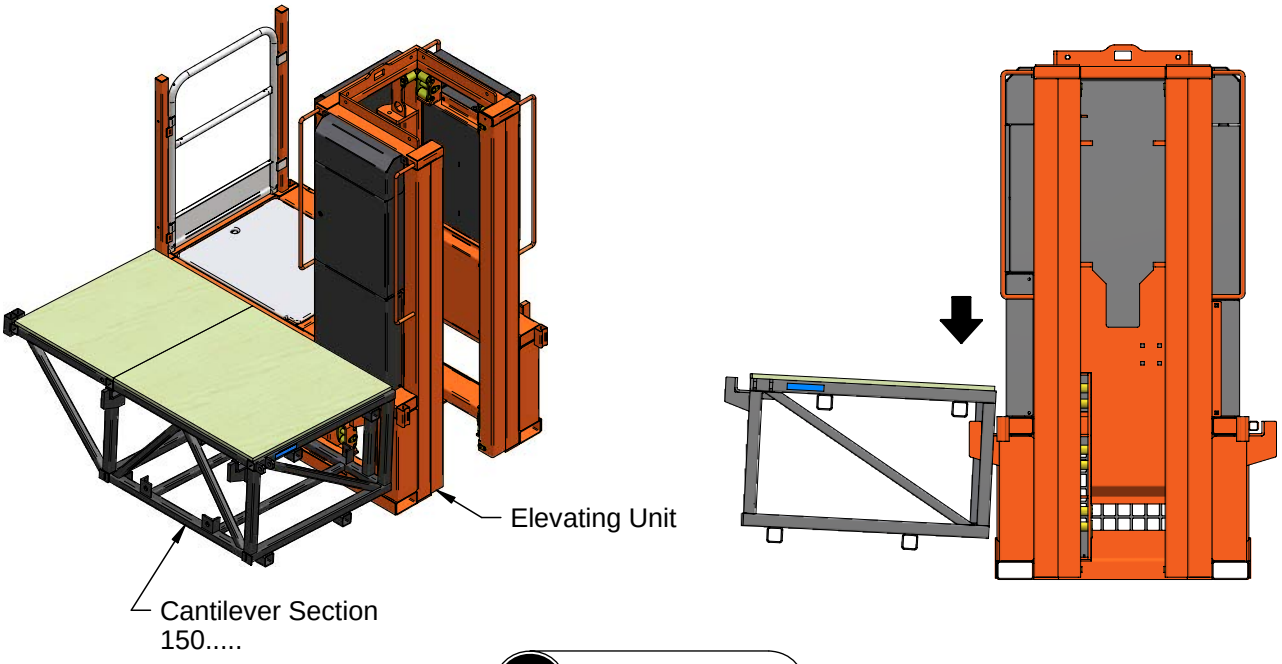
INSTALLATION OF NON-MODULAR CANTILEVER SECTIONS

Step 1 (see Figure D.17)

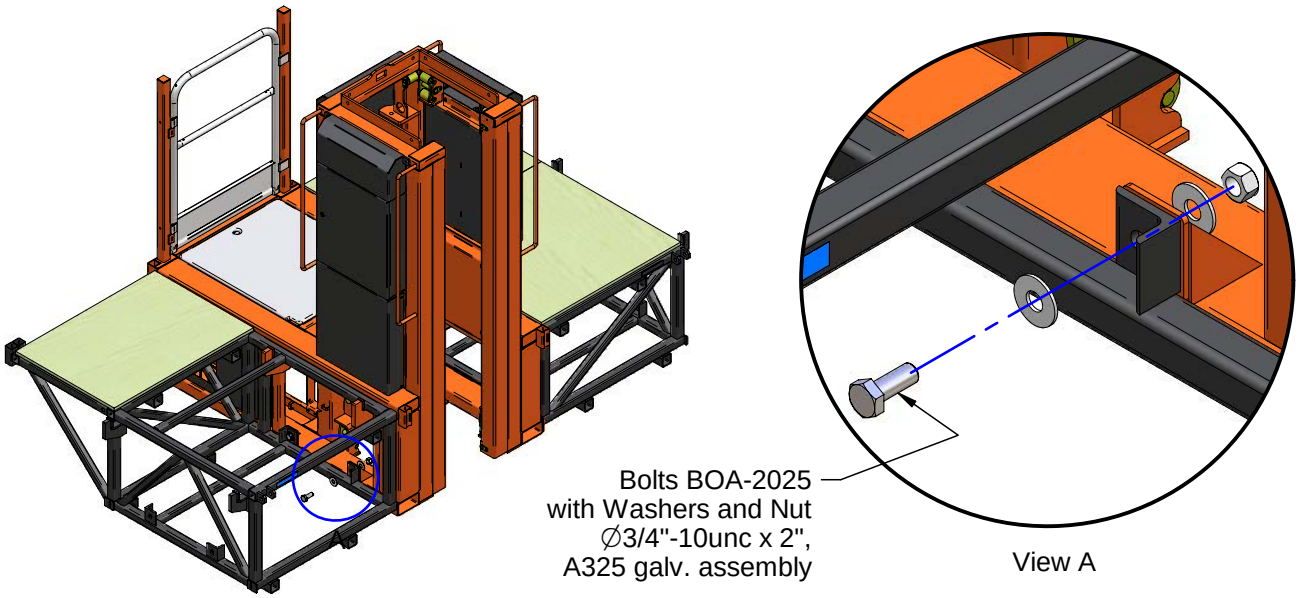
- Set down the cantilever section on the hooks of the elevating unit or on another those of cantilever section.

Step 2 (see Figure D.18)

- Bolt the cantilever section to the elevating unit or bolt the sections together with (2) two bolts (BOA-2025).



1 **Figure D.17**



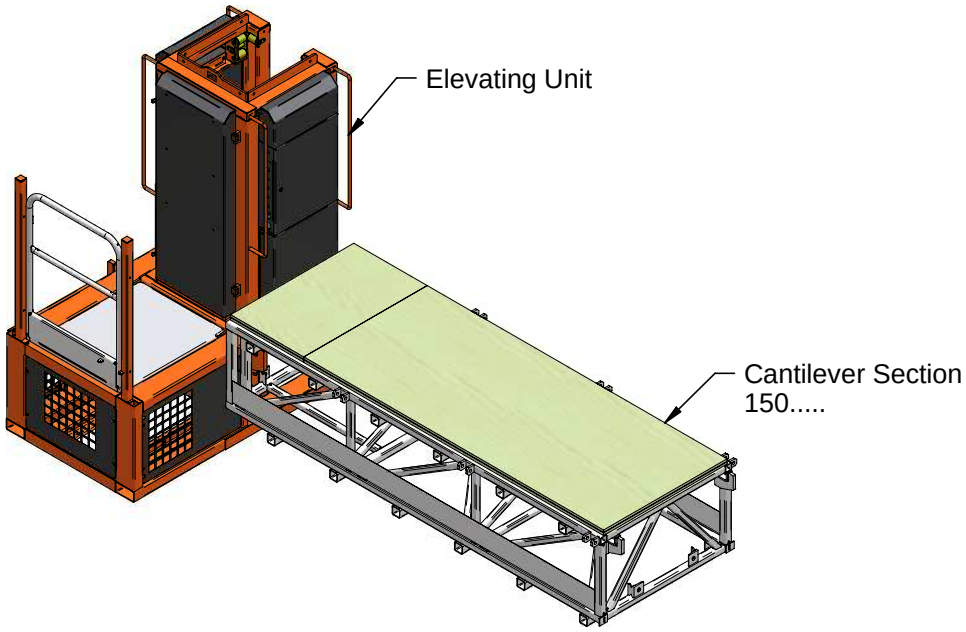
2 **Figure D.18**

Step 1 (see Figure D.19)

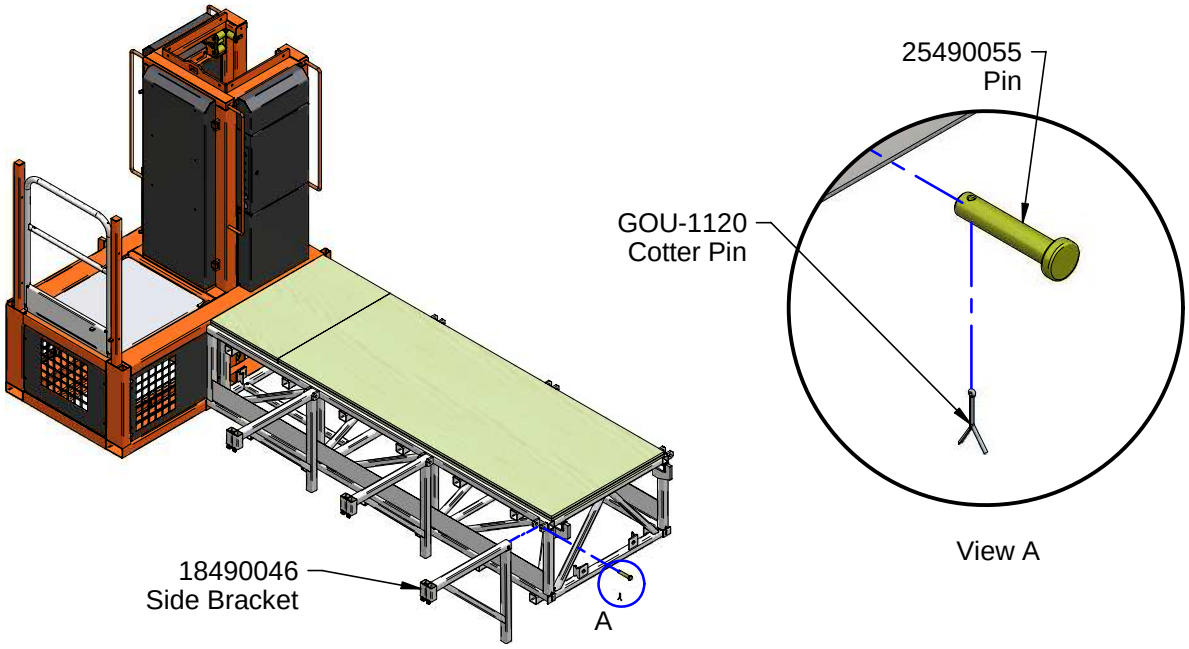
- Place and bolt the cantilver section.

Step 2 (see Figure D.20)

- Place each side bracket in its adaptor.
- Secure the side bracket using a pin and cotter pin.



1 **Figure D.19**

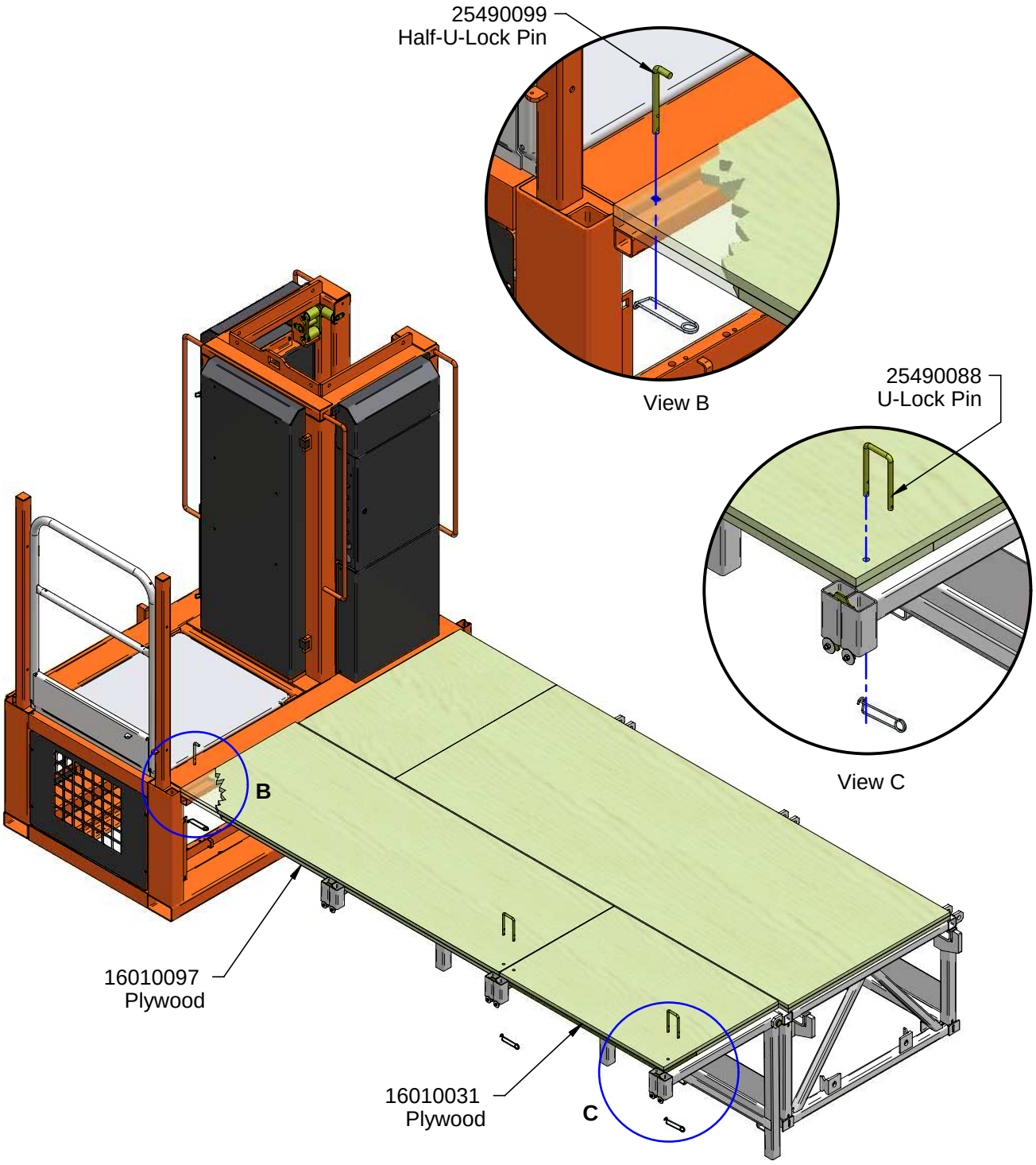


2 **Figure D.20**

INSTALLATION OF TAPER CANTILIVER SECTION

Step 3 (see Figure D.21)

- Place the plywood on the side brackets.
- Secure the plywood using half U-lock pins or U-lock pins.
- Secure the bolts using a safety pin.



3 **Figure D.21**

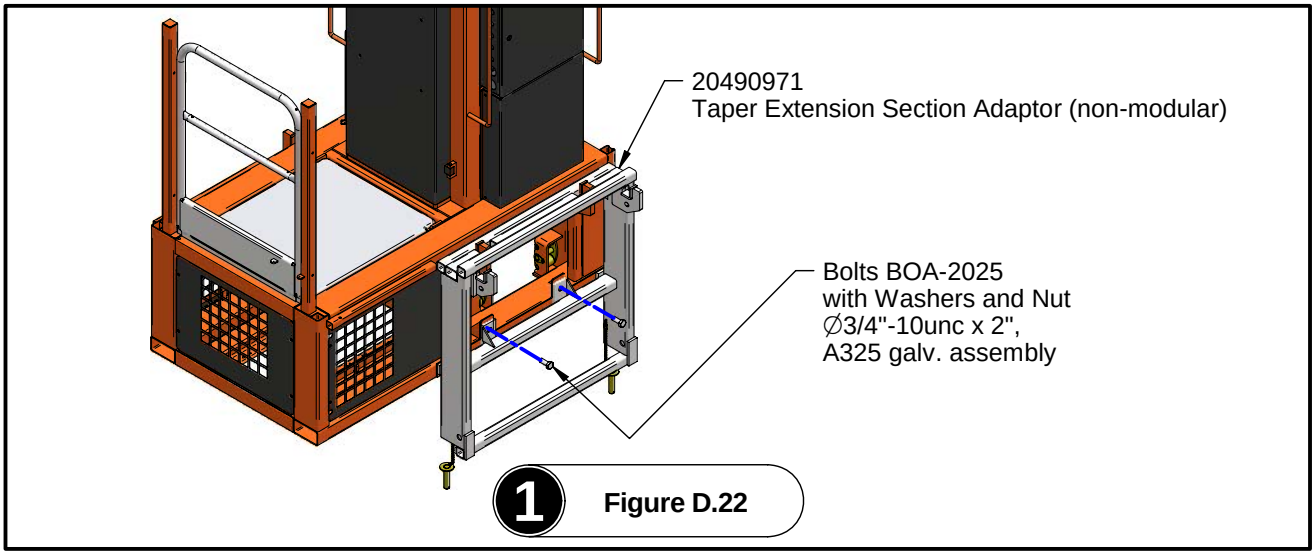
Installing the Bridge Sections

Step 1 (see Figure D.22)

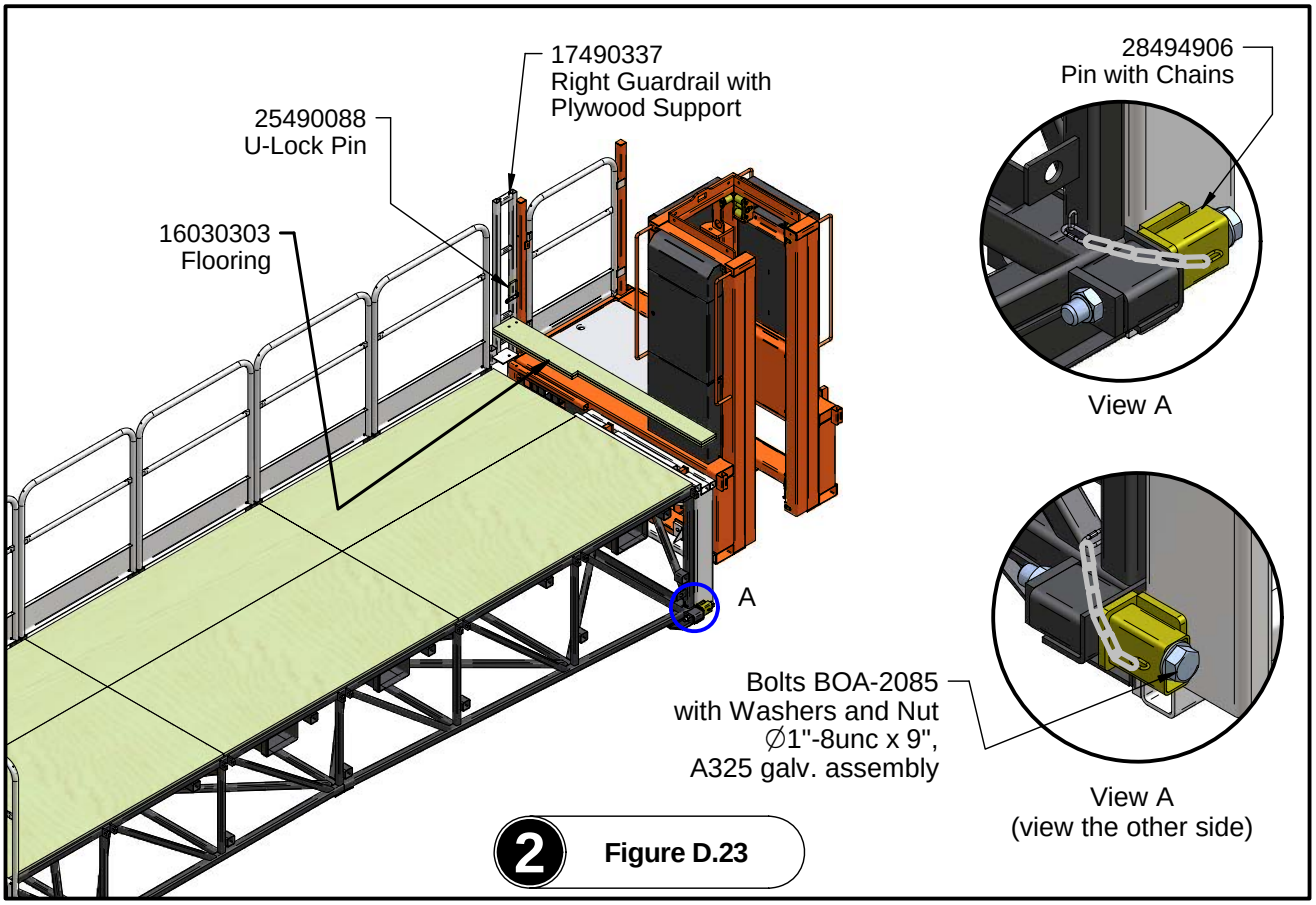
- Bolt the taper section adaptor on the elevating unit using four (4) bolts (BOA-2025).

Step 2 (see Figure D.23)

- Place the guardrail with plywood support in the pocket of the elevating unit.
- Place a U-lock pin to secure the plywood to the guardrail with plywood support.
- Nail or screw the plywood to the taper section adapter.
- Place the pin with chain in such a way so that the oval hole faces the taper section. Then, bolt the pin to the taper section using two (2) bolts (BOA-2085).



1 **Figure D.22**



2 **Figure D.23**

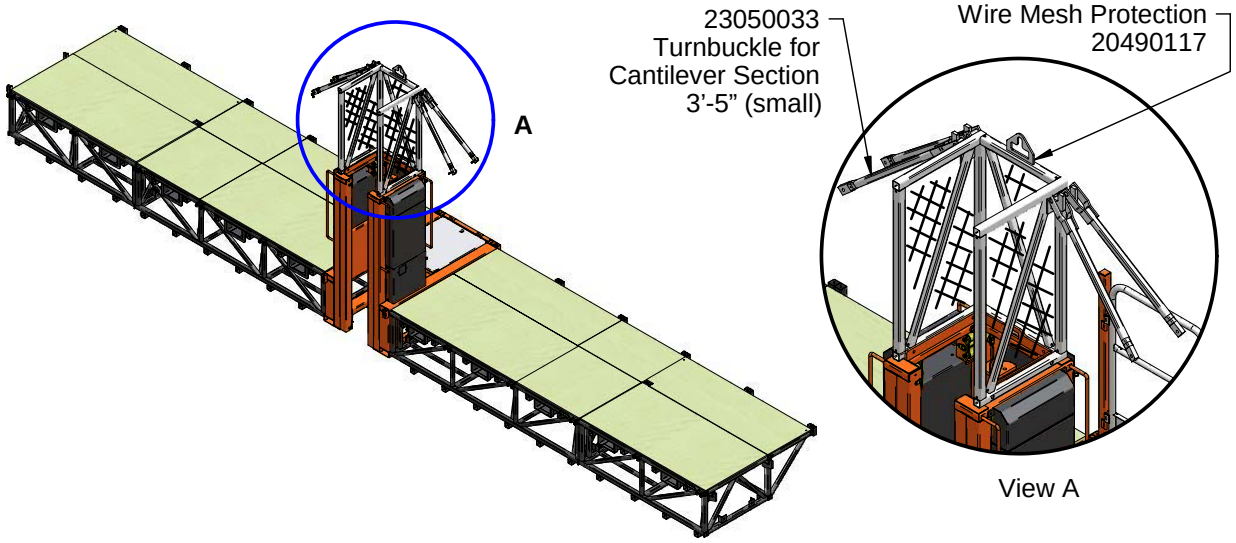
Installing the Bridge Sections (continued)

Step 1 (see Figure D.24)

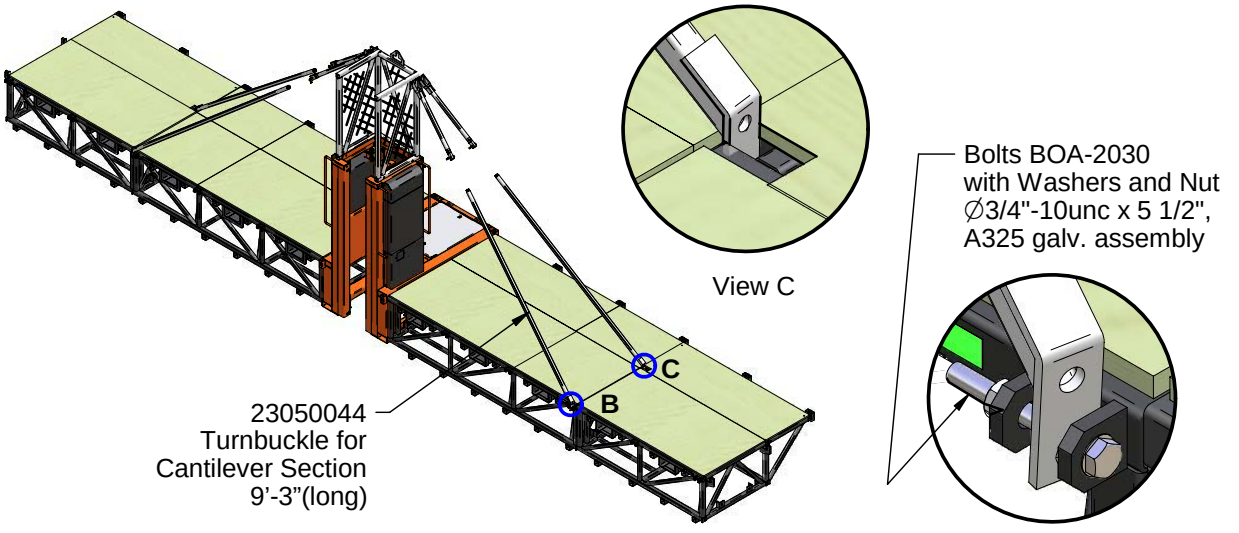
- **Important :** these steps must be done after the installation of the mast sections.
- ****Use the Turnbuckle when you install 16'-8" and more of Cantiliver Section****
- Install the short parts of the extension turnbuckles on the upper hooks of the protection mesh (See View A).

Step 2 (see Figure D.25)

- Install the long parts of the extension turnbuckles in the front and back side bracket adapters using a bolt (BOA-2022) (See View B)
- Clear the corner of the plywood to allow place for the turnbuckles (See View C).



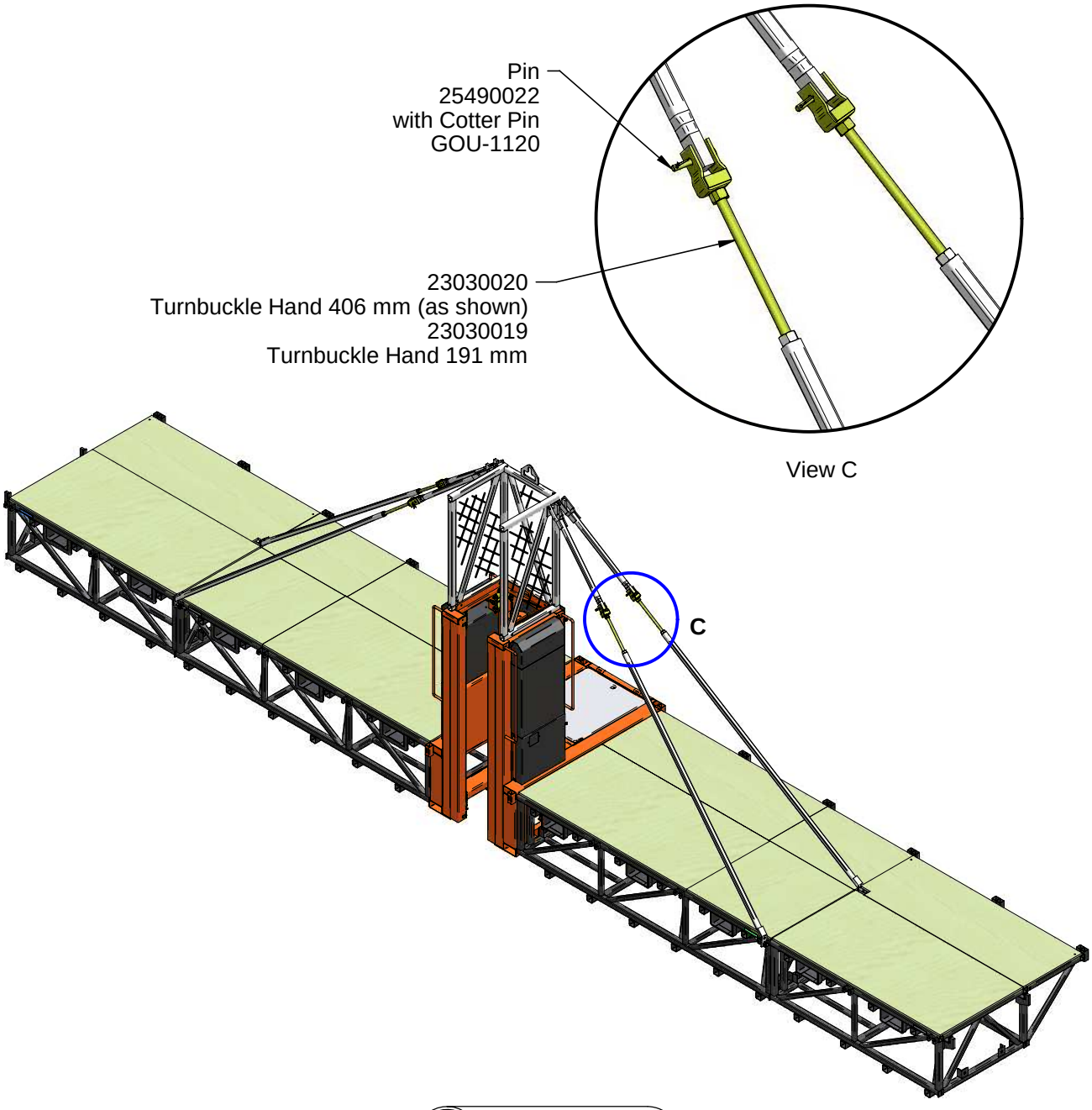
1 **Figure D.24**



2 **Figure D.25**

Step 3 (see Figure D.26)

- Join the short and the long parts of the extension turnbuckles using turnbuckle hands, as well as pins and cotter pins.
- Apply tension to the turnbuckles (see View C).



3 **Figure D.26**

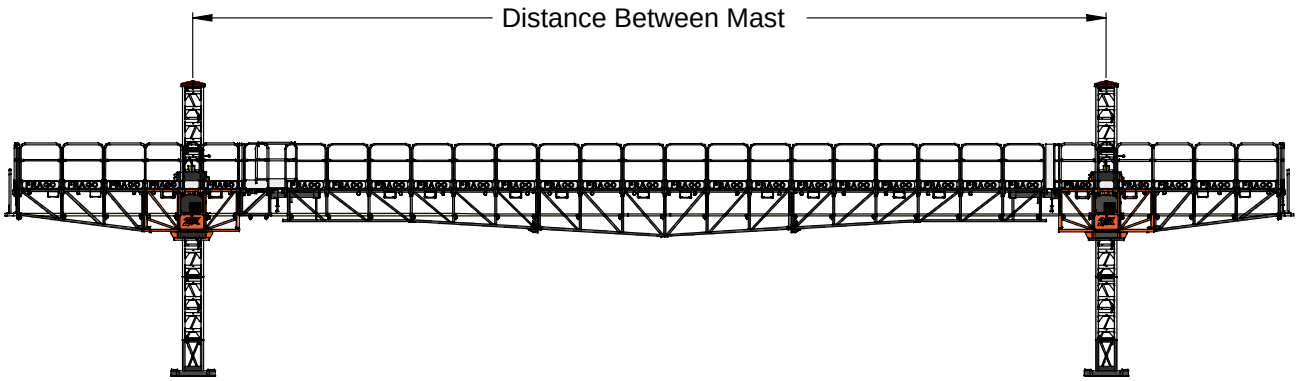


Figure D.22
Distance Between Mast

Minimal Distance Between Mast (Bridge of 20'-0" (6,1 m))	Imperial	Metric
Without intermediate section	24'-4 7/8"	7,44 m
With one intermediate section of 2'-6" (762 mm)	26'-10 7/8"	8,20 m
With two (2) intermediate section of 2'-6" (762 mm) or one intermediate section of 5'-0" (1,52 m)	29'-4 7/8"	8,96 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 5'-0" (1,52 m)	31'-10 7/8"	9,73 m
With two (2) intermediate section of 5'-0" (1,52 m) or one intermediate section of 10'-0" (3,0 m)	34'-4 7/8"	10,49 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 10'-0" (3,0 m)	36'-10 7/8"	11,25 m
With one intermediate section of 5'-0" (1,52 m) and one intermediate section of 10'-0" (3,0 m)	39'-4 7/8"	12,01 m
With two (2) intermediate section of 10'-0" (3,0 m)	44'-4 7/8"	13,54 m
Minimal Distance Between Mast (Bridge of 40'-0" (12,2 m)). Remove 10'-0" (3 m) from overall for bridge 30'-0" (9,1 m)	**Imperial**	**Metric**
Without intermediate section	44'-1"	13,44 m
With one intermediate section of 2'-6" (762 mm)	46'-7"	14,20 m
With two (2) intermediate section of 2'-6" (762 mm) or one intermediate section of 5'-0" (1,52 m)	49'-1"	14,96 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 5'-0" (1,52 m)	51'-7"	15,72 m
With two (2) intermediate section of 5'-0" (1,52 m) or one intermediate section of 10'-0" (3,0 m)	54'-1"	16,49 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 10'-0" (3,0 m)	56'-7"	17,25 m
With one intermediate section of 5'-0" (1,52 m) and one intermediate section of 10'-0" (3,0 m)	59'-1 "	18,01 m
With two (2) intermediate section of 10'-0" (3,0 m)	64'-1"	19,53 m
Minimal Distance Between Mast (Bridge of 60'-0" (18,3 m)). Remove 10'-0" (3 m) from overall for bridge 50'-0" (15,2 m)	**Imperial**	**Metric**
Without intermediate section	64'-1"	19,53 m
With one intermediate section of 2'-6" (762 mm)	66'-7"	20,30 m
With two (2) intermediate section of 2'-6" (762 mm) or one intermediate section of 5'-0" (1,52 m)	69'-1"	21,06 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 5'-0" (1,52 m)	71'-7"	21,82 m
With two (2) intermediate section of 5'-0" (1,52 m) or one intermediate section of 10'-0" (3,0 m)	74'-1"	22,58 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 10'-0" (3,0 m)	76'-7"	23,34 m
With one intermediate section of 5'-0" (1,52 m) and one intermediate section of 10'-0" (3,0 m)	79'-1"	24,11 m
With two (2) intermediate section of 10'-0" (3,0 m)	84'-1"	25,63 m

INSTALLATION OF INCLINOMETER

Step 1 (see Figure D.28)

1- Remove the derivation circuit.

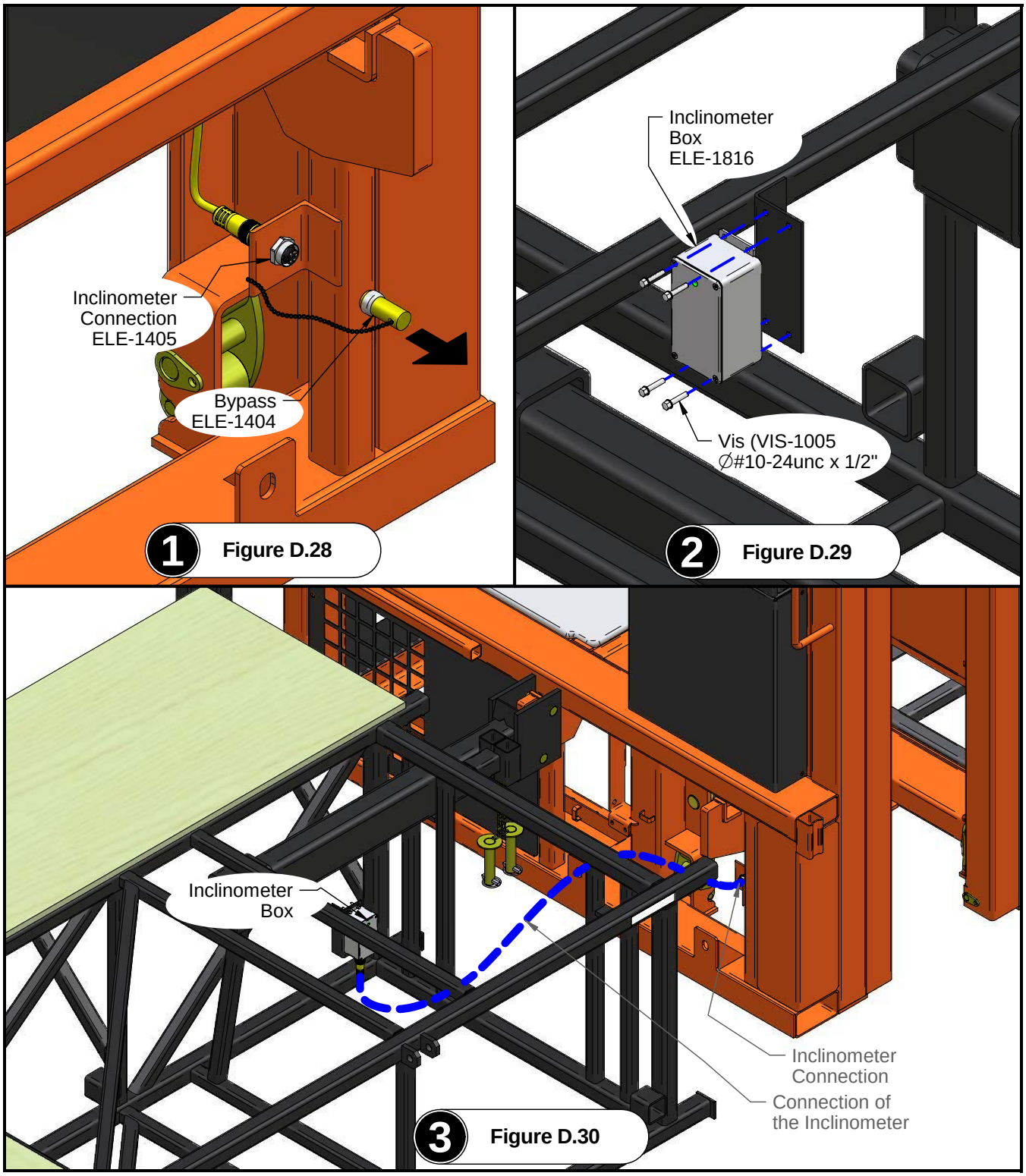
Step 2 (see Figure D.29)

2- Screw the inclinometer box to the inclinometer plate.

3- The connection points must face downwards.

Step 3 (see Figure D.30)

4- Connect the inclinometer box to the connection using the cable.



INSTALLATION OF MODULAR BRIDGE JOINT

Standard Distance Between Mast (Bridge of 20'-0" (6,1 m))	Imperial	Metric
Without intermediate section	24'-7 1/2"	7,52 m
With one intermediate section of 2'-6" (762 mm)	27'-1 1/2"	8,27 m
With two (2) intermediate section of 2'-6" (762 mm) or one intermediate section of 5'-0" (1,52 m)	29'-7 1/2"	9,02 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 5'-0" (1,52 m)	32'-1 1/2"	9,77 m
With two (2) intermediate section of 5'-0" (1,52 m) or one intermediate section of 10'-0" (3,0 m)	34'-7 1/2"	10,57 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 10'-0" (3,0 m)	37'-1 1/2"	11,32 m
With one intermediate section of 5'-0" (1,52 m) and one intermediate section of 10'-0" (3,0 m)	39'-7 1/2"	12,07 m
With two (2) intermediate section of 10'-0" (3,0 m)	44'-7 1/2"	13,62 m
Standard Distance Between Mast (Bridge of 40'-0" (12,2 m)). Remove 10'-0" (3 m) from overall for bridge 30'-0" (9,1 m)	**Imperial**	**Metric**
Without intermediate section	44'-8 1/2"	13,62 m
With one intermediate section of 2'-6" (762 mm)	47'-2 1/2"	14,42 m
With two (2) intermediate section of 2'-6" (762 mm) or one intermediate section of 5'-0" (1,52 m)	49'-8 1/2"	15,17 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 5'-0" (1,52 m)	52'-2 1/2"	15,92 m
With two (2) intermediate section of 5'-0" (1,52 m) or one intermediate section of 10'-0" (3,0 m)	54'-8 1/2"	16,67 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 10'-0" (3,0 m)	57'-2 1/2"	17,42 m
With one intermediate section of 5'-0" (1,52 m) and one intermediate section of 10'-0" (3,0 m)	59'-8 1/2"	18,22 m
With two (2) intermediate section of 10'-0" (3,0 m)	64'-8 1/2"	19,77 m
Standard Distance Between Mast (Bridge of 60'-0" (18,3 m)). Remove 10'-0" (3 m) from overall for bridge 50'-0" (15,2 m)	**Imperial**	**Metric**
Without intermediate section	64'-8 1/2"	19,72 m
With one intermediate section of 2'-6" (762 mm)	67'-2 1/2"	20,52 m
With two (2) intermediate section of 2'-6" (762 mm) or one intermediate section of 5'-0" (1,52 m)	69'-8 1/2"	21,27 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 5'-0" (1,52 m)	72'-2 1/2"	22,02 m
With two (2) intermediate section of 5'-0" (1,52 m) or one intermediate section of 10'-0" (3,0 m)	74'-8 1/2"	22,77 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 10'-0" (3,0 m)	77'-2 1/2"	23,52 m
With one intermediate section of 5'-0" (1,52 m) and one intermediate section of 10'-0" (3,0 m)	79'-8 1/2"	24,32 m
With two (2) intermediate section of 10'-0" (3,0 m)	84'-8 1/2"	25,82 m

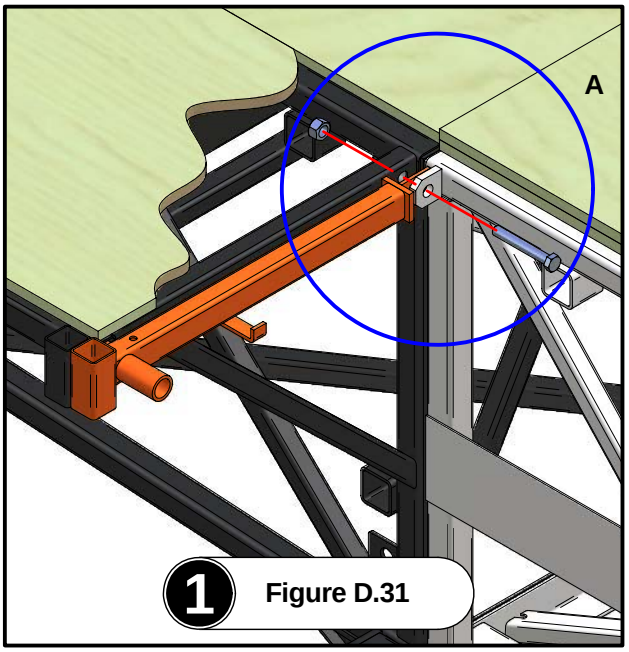
Maximal Distance Between Mast (Bridge of 20'-0" (6,1 m))	Imperial	Metric
Without intermediate section	24'-1 1/4"	7,58 m
With one intermediate section of 2'-6" (762 mm)	27'-4 1/4"	8,34 m
With two (2) intermediate section of 2'-6" (762 mm) or one intermediate section of 5'-0" (1,52 m)	29'-10 1/4"	9,10 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 5'-0" (1,52 m)	32'-4 1/4"	9,86 m
With two (2) intermediate section of 5'-0" (1,52 m) or one intermediate section of 10'-0" (3,0 m)	34'-10 1/4"	10,63 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 10'-0" (3,0 m)	37'-4 1/4"	11,39 m
With one intermediate section of 5'-0" (1,52 m) and one intermediate section of 10'-0" (3,0 m)	39'-10 1/4"	12,15 m
With two (2) intermediate section of 10'-0" (3,0 m)	44'-10 1/4"	13,67 m
Maximal Distance Between Mast (Bridge of 40'-0" (12,2 m)). Remove 10'-0" (3 m) from overall for bridge 30'-0" (9,1 m)	**Imperial**	**Metric**
Without intermediate section	45'-3 3/4"	13,81 m
With one intermediate section of 2'-6" (762 mm)	47'-9 3/4"	14,58 m
With two (2) intermediate section of 2'-6" (762 mm) or one intermediate section of 5'-0" (1,52 m)	50'-3 3/4"	15,34 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 5'-0" (1,52 m)	52'-9 3/4"	16,10 m
With two (2) intermediate section of 5'-0" (1,52 m) or one intermediate section of 10'-0" (3,0 m)	55'-3 3/4"	16,86 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 10'-0" (3,0 m)	57'-9 3/4"	17,62 m
With one intermediate section of 5'-0" (1,52 m) and one intermediate section of 10'-0" (3,0 m)	60'-3 3/4"	18,39 m
With two (2) intermediate section of 10'-0" (3,0 m)	65'-3 3/4"	19,91 m
Maximal Distance Between Mast (Bridge of 60'-0" (18,3 m)). Remove 10'-0" (3 m) from overall for bridge 50'-0" (15,2 m)	**Imperial**	**Metric**
Without intermediate section	65'-3 3/4"	19,91 m
With one intermediate section of 2'-6" (762 mm)	67'-9 3/4"	20,67 m
With two (2) intermediate section of 2'-6" (762 mm) or one intermediate section of 5'-0" (1,52 m)	69'-3 3/4"	21,43 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 5'-0" (1,52 m)	72'-9 3/4"	22,20 m
With two (2) intermediate section of 5'-0" (1,52 m) or one intermediate section of 10'-0" (3,0 m)	75'-3 3/4"	22,96 m
With one intermediate section of 2'-6" (762 mm) and one intermediate section of 10'-0" (3,0 m)	77'-9 3/4"	23,73 m
With one intermediate section of 5'-0" (1,52 m) and one intermediate section of 10'-0" (3,0 m)	80'-3 3/4"	24,48 m
With two (2) intermediate section of 10'-0" (3,0 m)	85'-3 3/4"	26,01 m

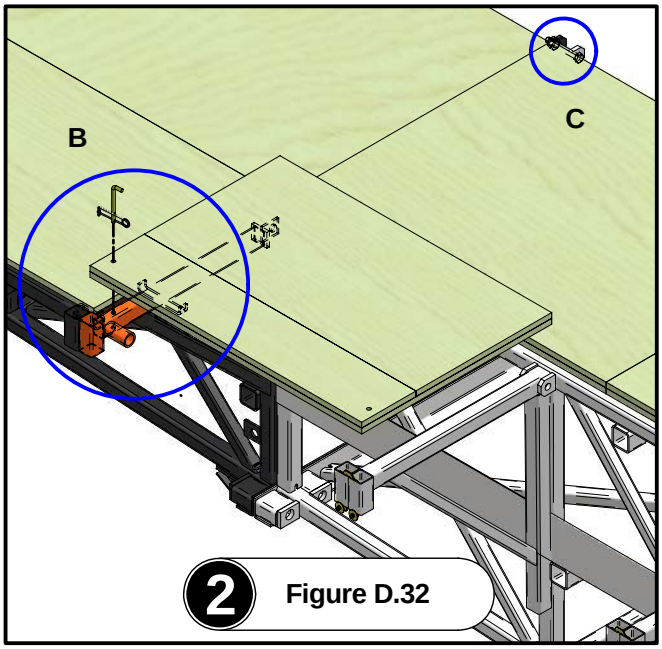
Step 1 (see Figure D.31)

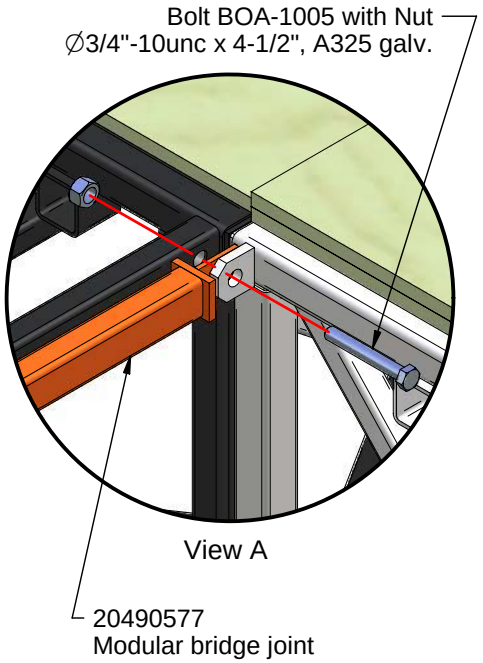
- Install the modular bridge joint into the attach behind the platform with bolt (BOA-1005).
- Introduce the tube from the modular bridge joint into the frame of the modular bridge section.

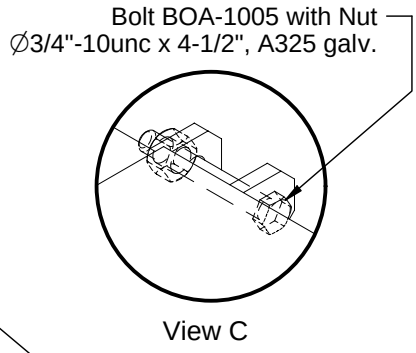
Step 2 (see Figure D.32)

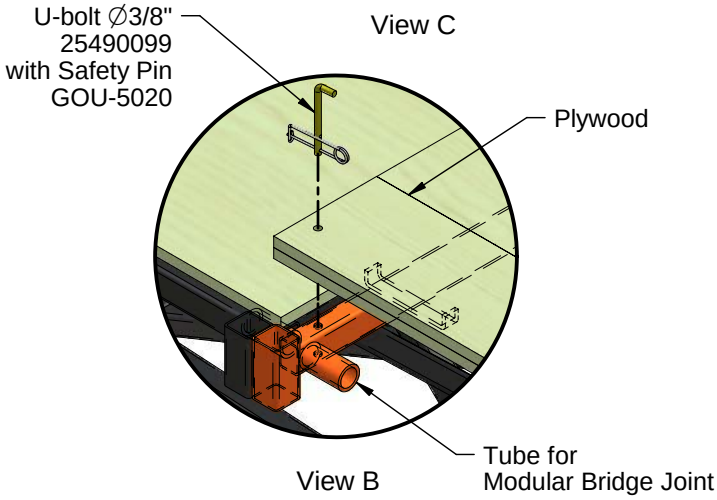
- Bolt the bridge section with the bolt (BOA-1005) (see View C).
- Install the side bracket into each attach behind the platform.
- Place the plywood and insert the U-bolt through the plywood, side bracket and modular bridge joint (see View B).

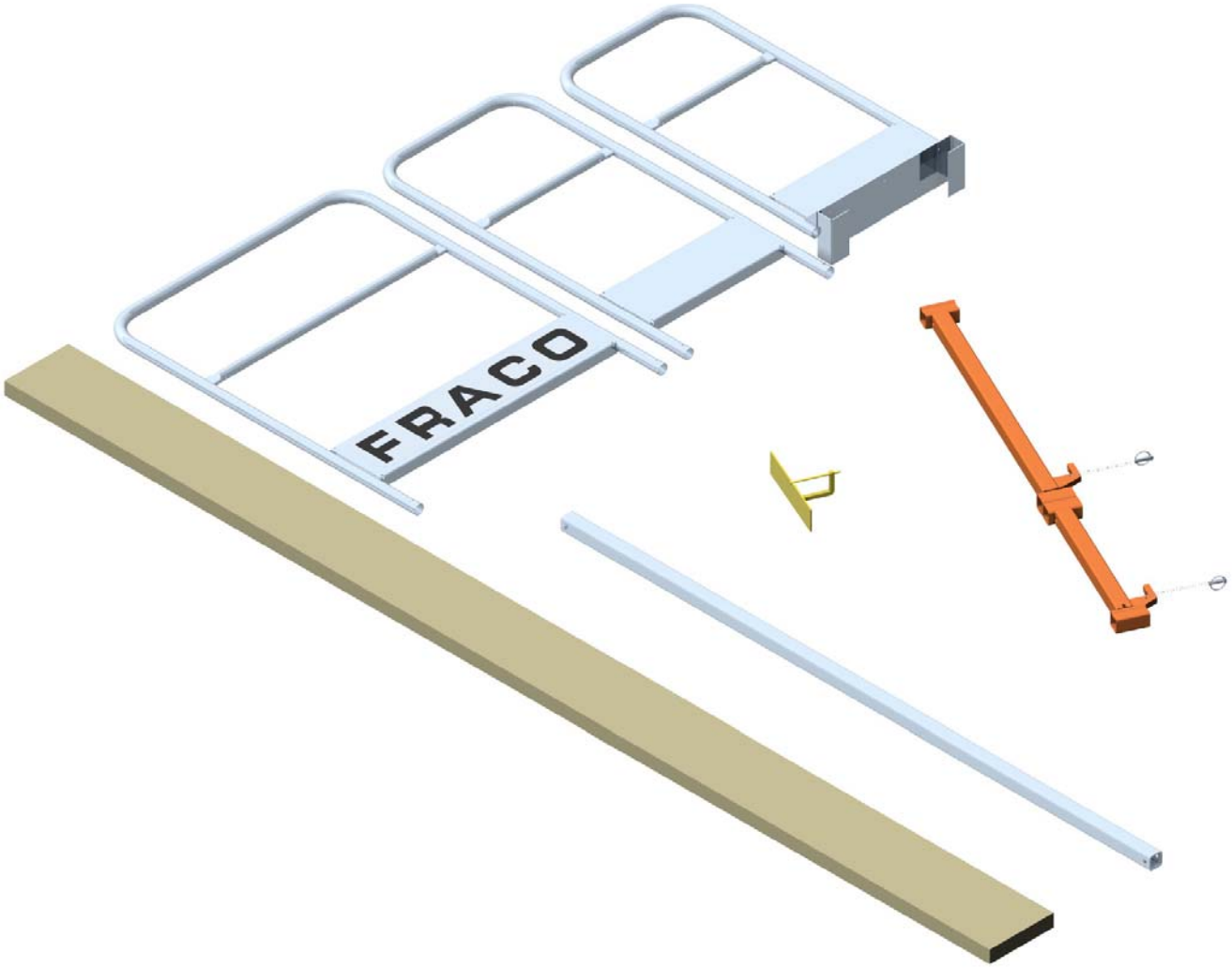












CHAPTER E

Accessories

- Data sheet of accessories E-2
- Installation of Guardrail Pockets Supports and Guardrails E-3
- Installation of Outriggers E-4
- Installation of Extension Outriggers E-8
- Installation of Plank Ties and Plank-End Guardrails E-10
- Installation of Outrigger Supports (optional) E-12
- Installation of Outrigger-End Guardrails. E-14
- Installation of Anti-Swivel Devices (optional) E-16
- Installation of Anchoring Device Access Guardrails E-17
- Installation of Work Zone Guardrails E-18
- Installation of ACT Descent Limiting Device (optional) E-20
- Installation of Anti-Pivot Devices with Big Wheel (optional). E-21

DATA SHEET OF ACCESSORIES

	Imperial	Metric
Guardrail 3’-4” x 4’-2” (1,0 m x 1,27 m) (17490023)	31 lb	14,1 kg
Guardrail 16 1/2” x 4’-2” (419 mm x 1,27 m) (17490281)	18 lb	8,1 kg
Access Guardrail with Ladder 3’-4” x 4’-2” (1,0 m x 1,27 m) (17490326)	292 lb	132 kg
Extensible Guardrail 3'-4" x 3'-7" (1,0 m x 1,10 m) (17490034)	30 lb	13,6 kg
Plank-End Guardrail 21” x 3’-6” (533 mm x 1,07 m) (17490045)	26 lb	11,8 kg
Guardrail Pockets Support (20490195)	21 lb	9,5 kg
Outrigger 3/16” x 2" x 2" x 7'-8" (5 mm x 51 mm x 51 mm x 2,34 m) (19010023)	33 lb	15,0 kg
Outrigger 3/16” x 2" x 2" x 8'-8" (5 mm x 51 mm x 51 mm x 2,64 m) (19010034)	37 lb	16,6 kg
Outrigger 3/16” x 2" x 2" x 10'-6" (5 mm x 51 mm x 51 mm x 3,2 m) (19010045)	45 lb	20,5 kg
Outrigger 3/16” x 2" x 2" x 13'-6" (5 mm x 51 mm x 51 mm x 4,11 m) (19010056)	55 lb	25,0 kg
Outrigger-End Guardrail 4’-3” (1,30 m) (17490067)	12 lb	5,4 kg
« L » Work Area Guardrail (17490056)	7,5 lb	3,4 kg
Handrail 1 1/2" x 1 1/2" x 4'-0" (38,1 mm x 38,1 mm x 1,2 m) (20490230)	7,2 lb	3,3 kg
Handrail 1 1/2" x 1 1/2" x 8'-0" (38,1 mm x 38,1 mm x 2,4 m) (20490241)	14 lb	6,4 kg
Junction Tube 1 1/4" x 1 1/4" x 30" (31,8 mm x 31,8 mm x 762 mm) (20490353)	4,4 lb	2,0 kg
ACT Descent Limiting Device (20490768)	48 lb	21,7 kg

INSTALLATION OF GUARDRAIL POCKET

Step 1 (see Figure E.1)

- Insert the guardrail pockets support into the cantilever section's hooks.

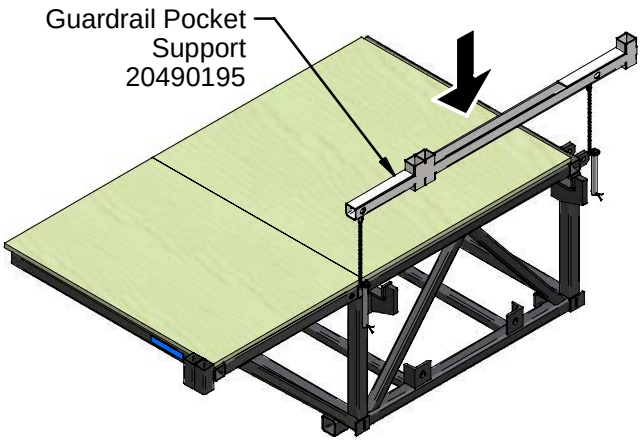
Step 2 (see Figure E.2)

- Fix the guardrail pockets support with the pin.

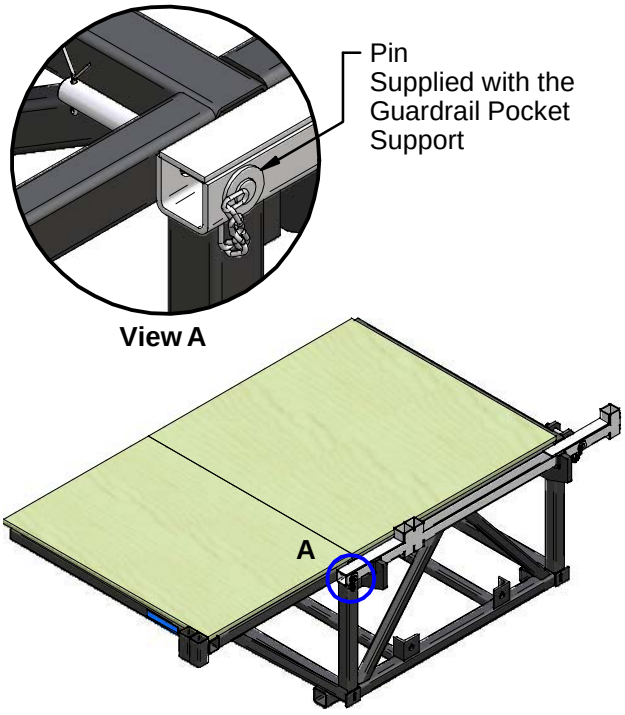
SUPPORT AND GUARDRAIL

Step 3 (see Figure E.3)

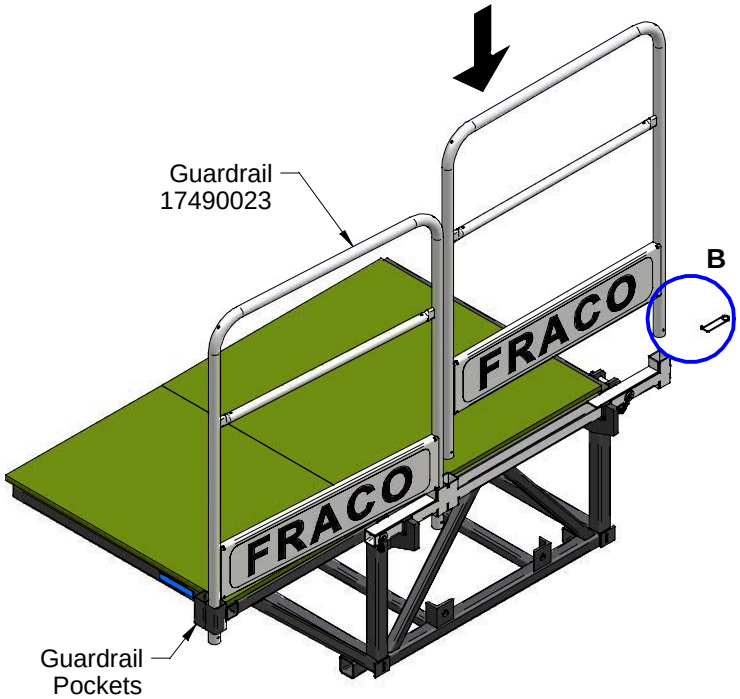
- Install guardrails into the guardrail pockets and into the guardrail pockets supports.
- Insert a safety pin (GOU-5020) with chain at each guardrails.
- Place the guardrails wherever there might be a risk of falling.

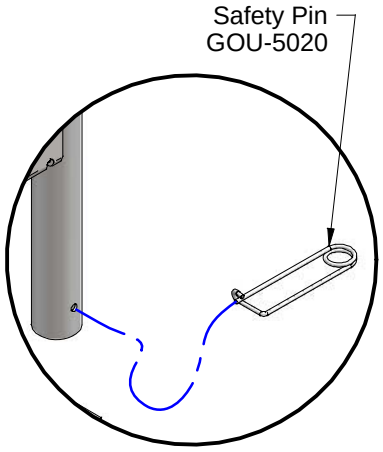


1 **Figure E.1**



2 **Figure E.2**





3 **Figure E.3**

ACCESSORIES

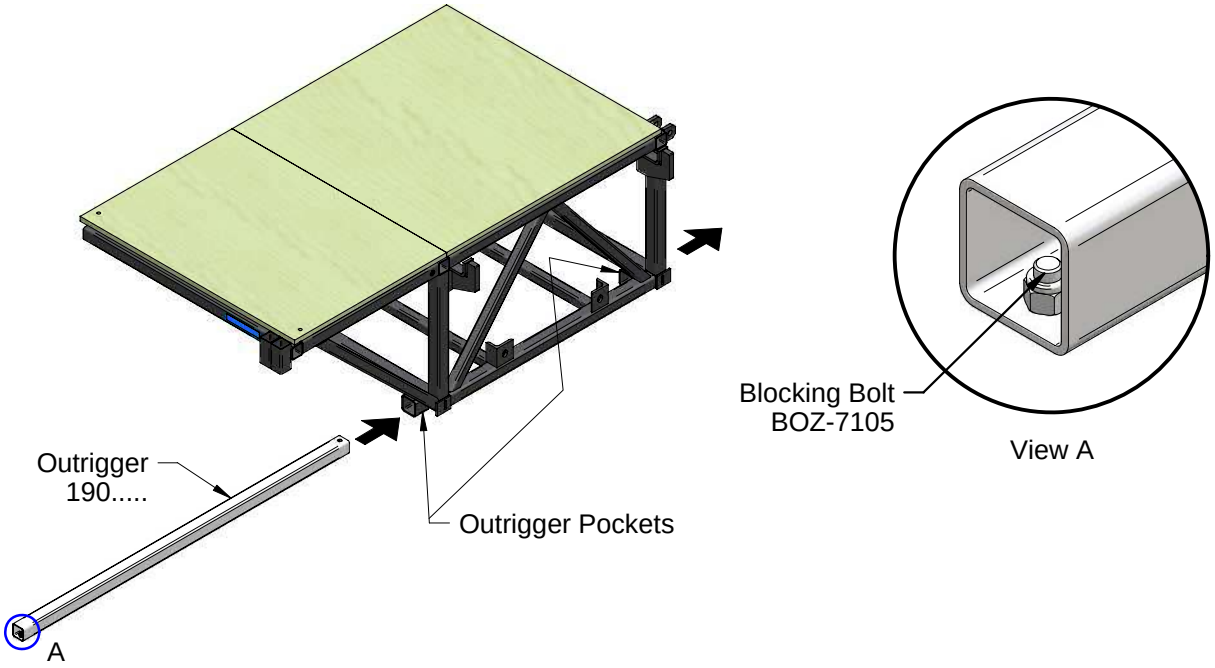
INSTALLATION OF OUTRIGGERS

Step 1 (see Figure E.4)

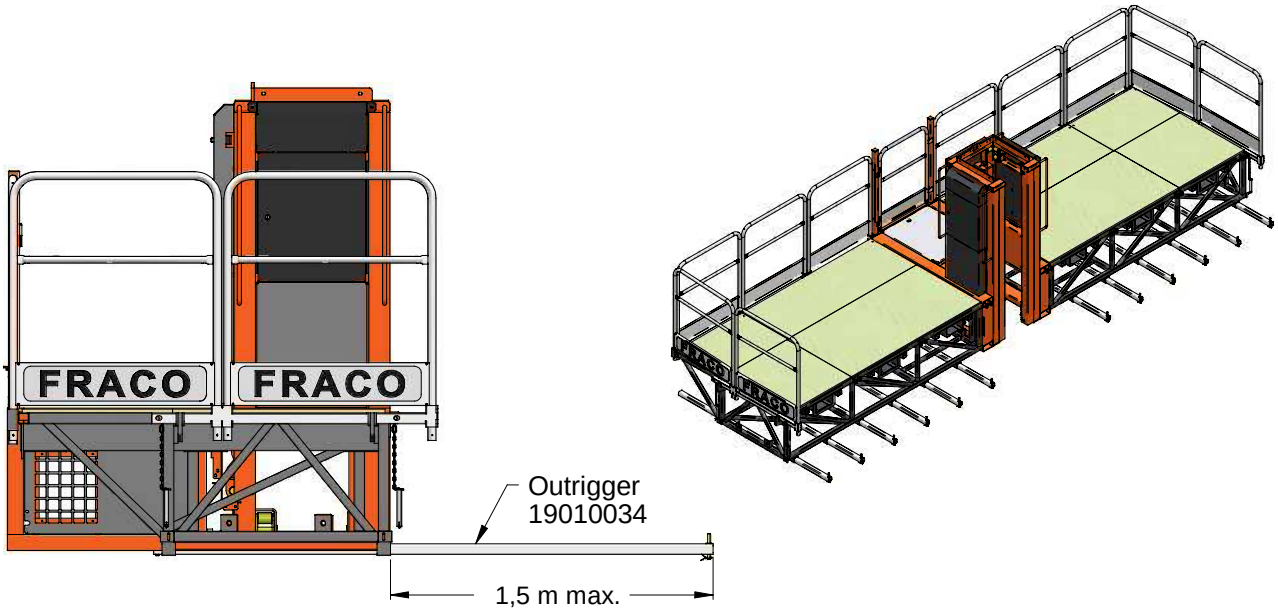
- Ensure that the blocking bolt (BOZ-7105) is in place before installing the outriggers.
- Slide the outriggers into the top or bottom cantilever section pockets or bride section pockets.

Step 2 (see Figure E.5)

- Install the outriggers in such a way that the top row or the bottom row of cantilever section pockets or bridge section pockets is completely filled.



1 Figure E.4



2 Figure E.5

Installation of Outriggers (continued)

Step 3 (see Figure E.6)

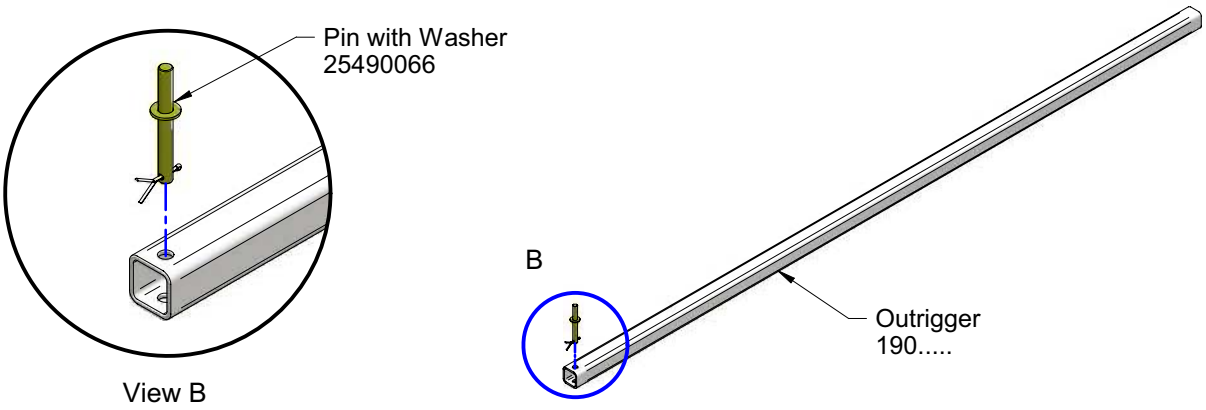
- Install a pin with washer on each outrigger.

Step 4 (see Figure E.7)

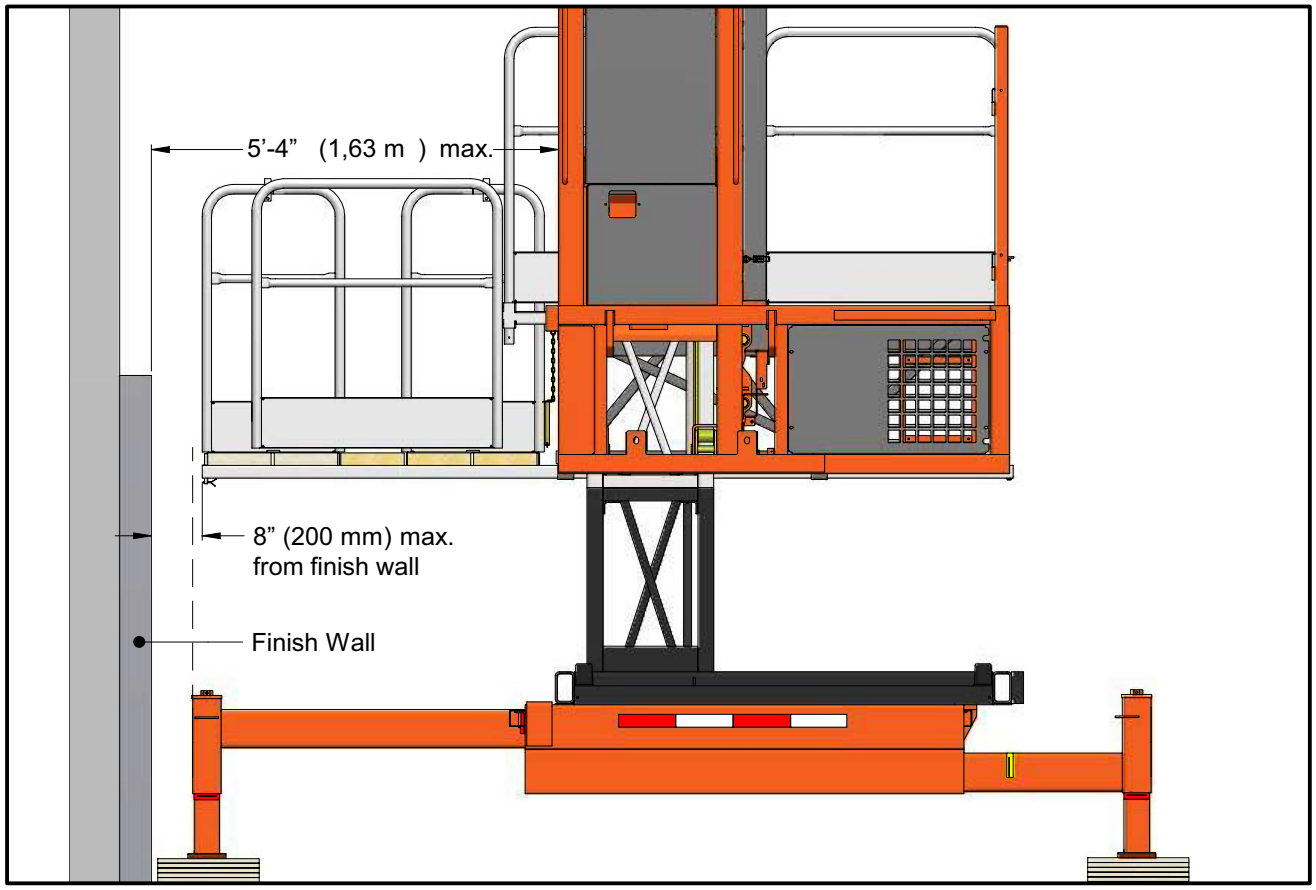
- Adjust the outriggers so that they are from 150 mm to 250 mm from the finished wall.

Important :

In freestanding situation without anchoring device, outriggers do not exceed the freestanding base stabilizers.



3 **Figure E.6**



4 **Figure E.7**

ACCESSORIES

INSTALLATION OF OUTRIGGERS (CONTINUED)

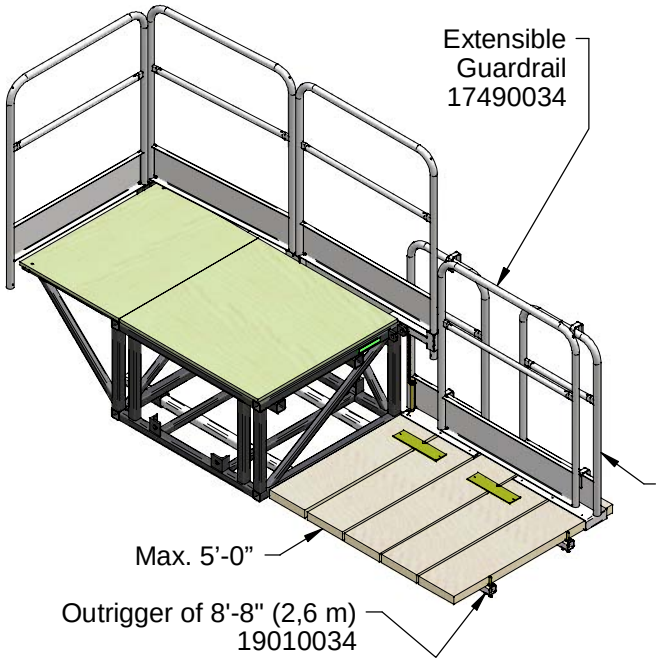
Possible setup (must be approved by engineering FRACO department)

A (see Figure E.8) and B (see Figure E.9)

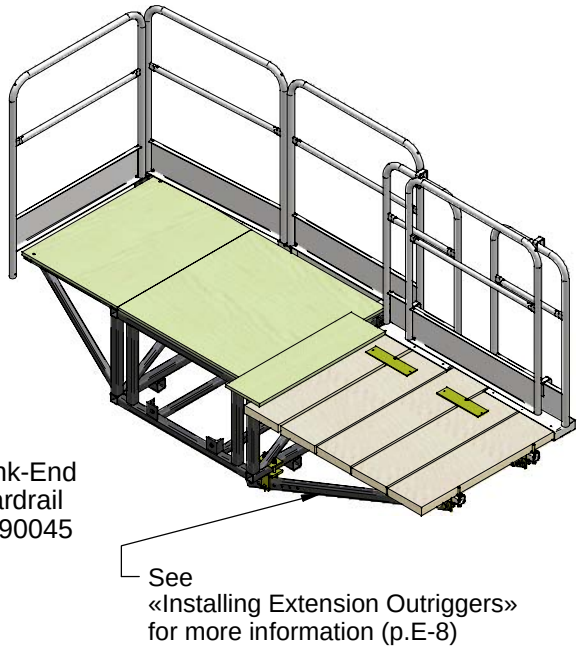
- 8’-8” (2,6 m) outrigger with a maximum clearance of two (2) to six (6) plank-widths. Planks of 10” (250 mm) wide.

C (see Figure E.10) and D (see Figure E.11)

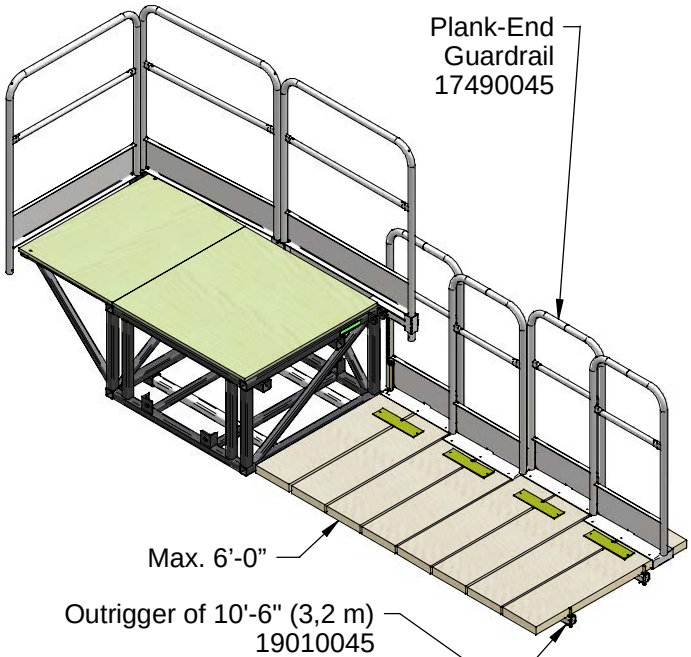
- 10’-6” (3,2 m) outrigger with a maximum clearance of two (2) to eight (8) plank-widths. Planks of 10” (250 mm) wide.



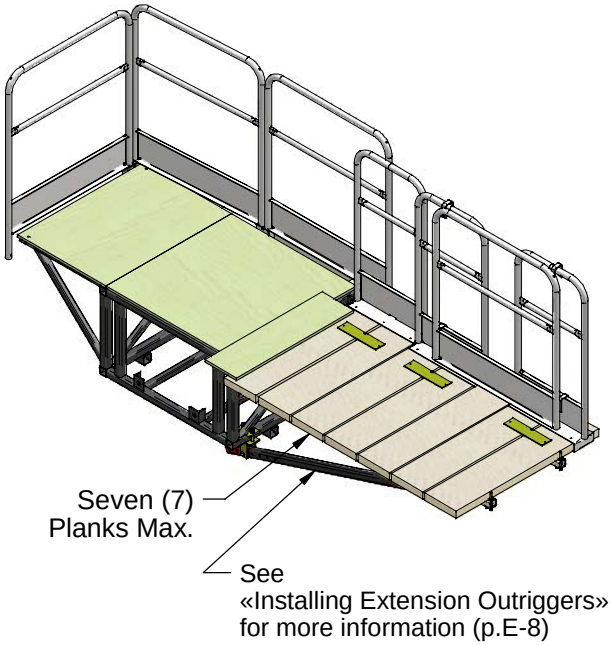
A **Figure E.8**



B **Figure E.9**



C **Figure E.10**



D **Figure E.11**

ACCESSORIES

INSTALLATION OF OUTRIGGERS (CONTINUED)

Possible setup (must be approved by engineering FRACO department)

E (see Figure E.12)

- 4,1 m outrigger with a maximum clearance of 2 to 11 plank-widths (planks of 250 mm wide).

Important :

This configuration must be used exclusively with the outrigger pockets found at the upper portion of the cantilever section.

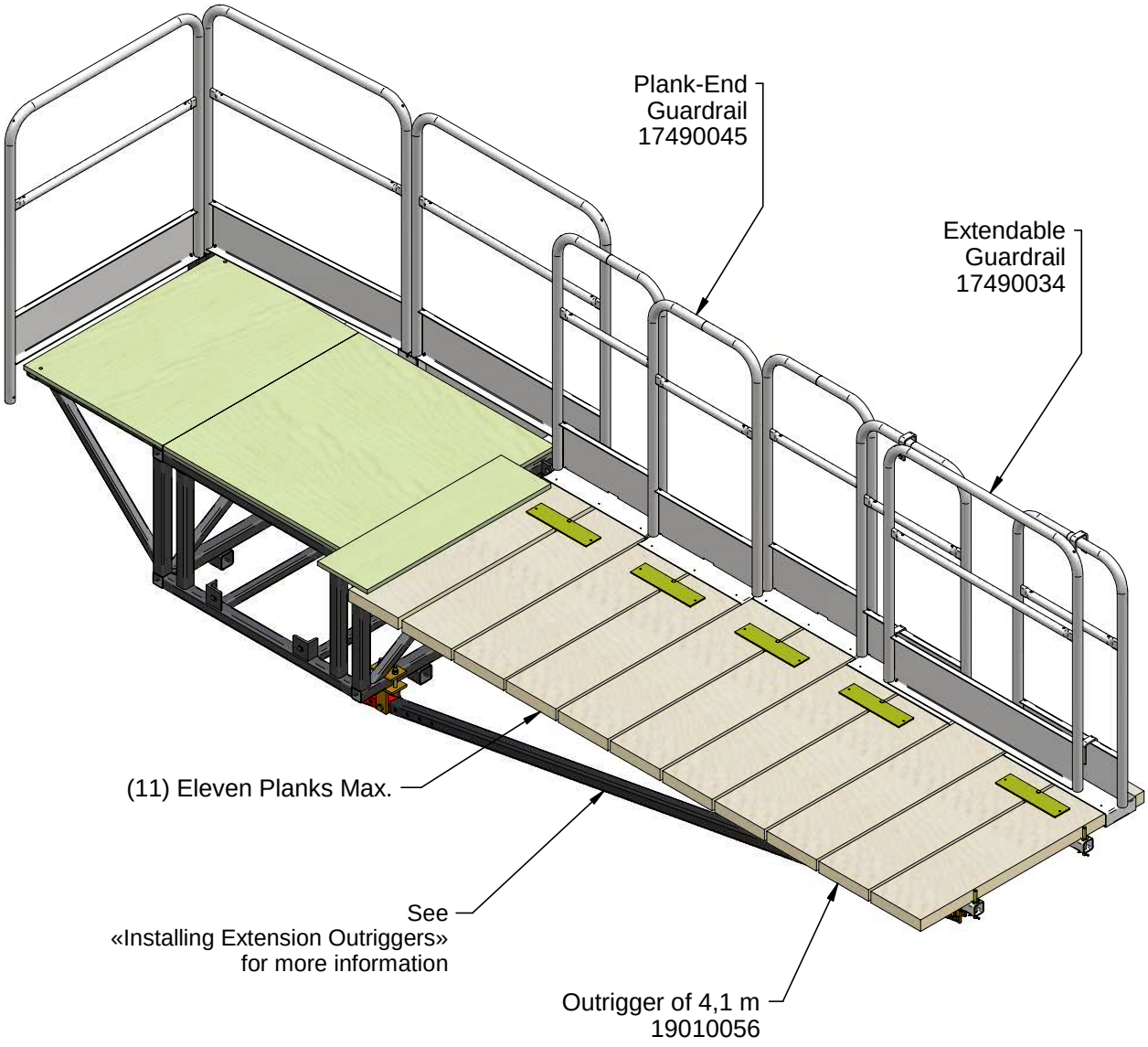


Figure E.12

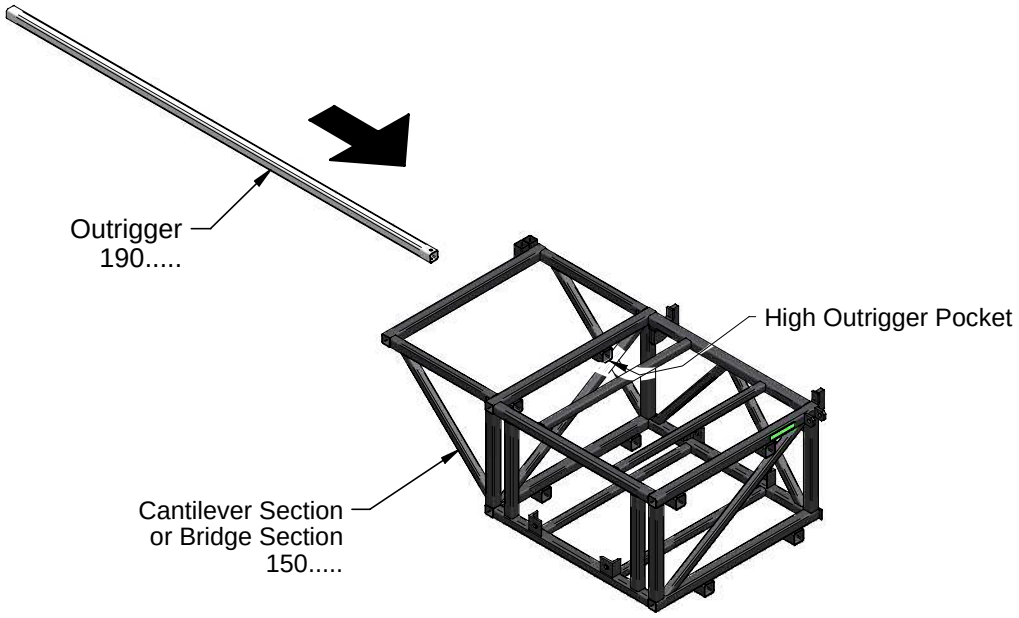
INSTALLATION OF EXTENSION OUTRIGGERS

Step 1 (see Figure E.13)

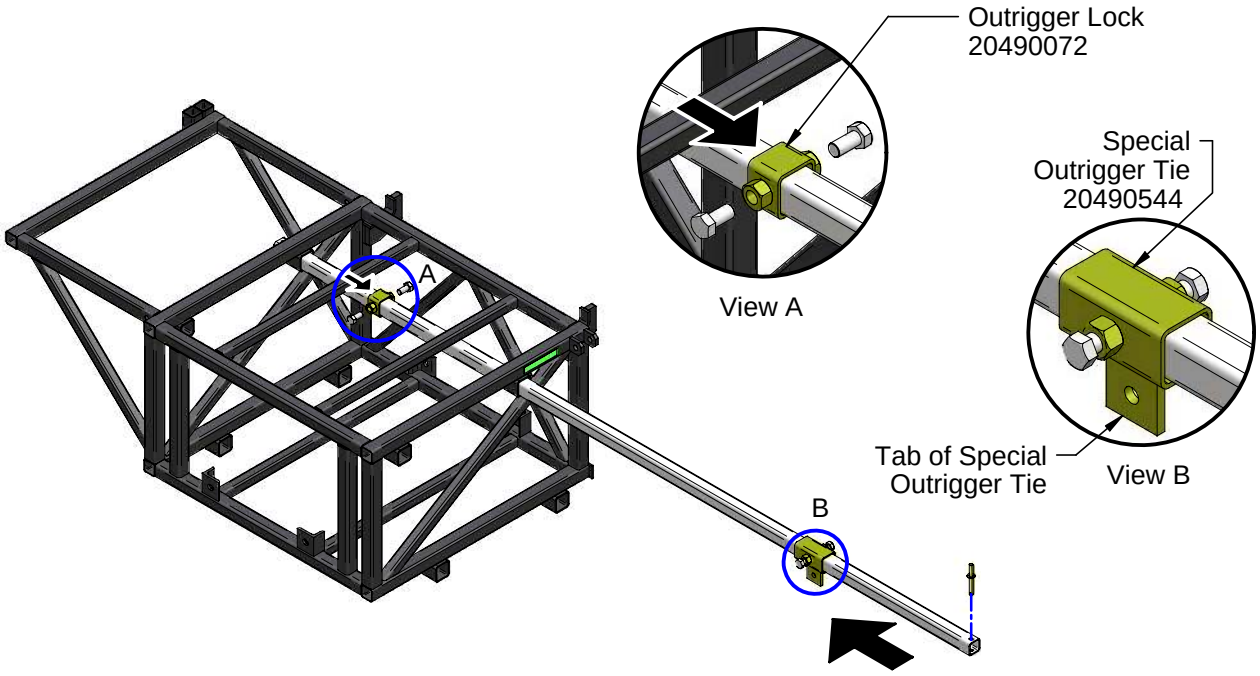
- Slide the outrigger into the upper pockets at the top of cantilever section or bridge section.

Step 2 (see Figure E.14)

- Slide an outrigger lock around an outrigger.
- Slide an special outrigger tie onto the outrigger.
- Tab must be pointed downwards.



1 **Figure E.13**



2 **Figure E.14**

Step 3 (see Figure E.15)

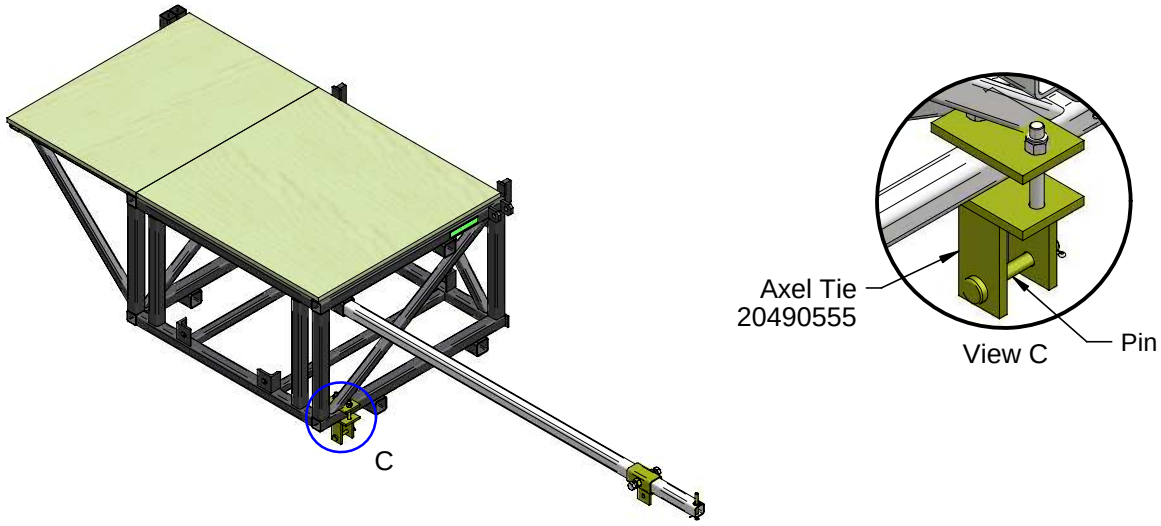
- Bolt the axel tie onto the lower tube of the cantilever section or bridge section and tighten it securely.
- The pin must be pointed downwards.

Step 4 (see Figure E.16)

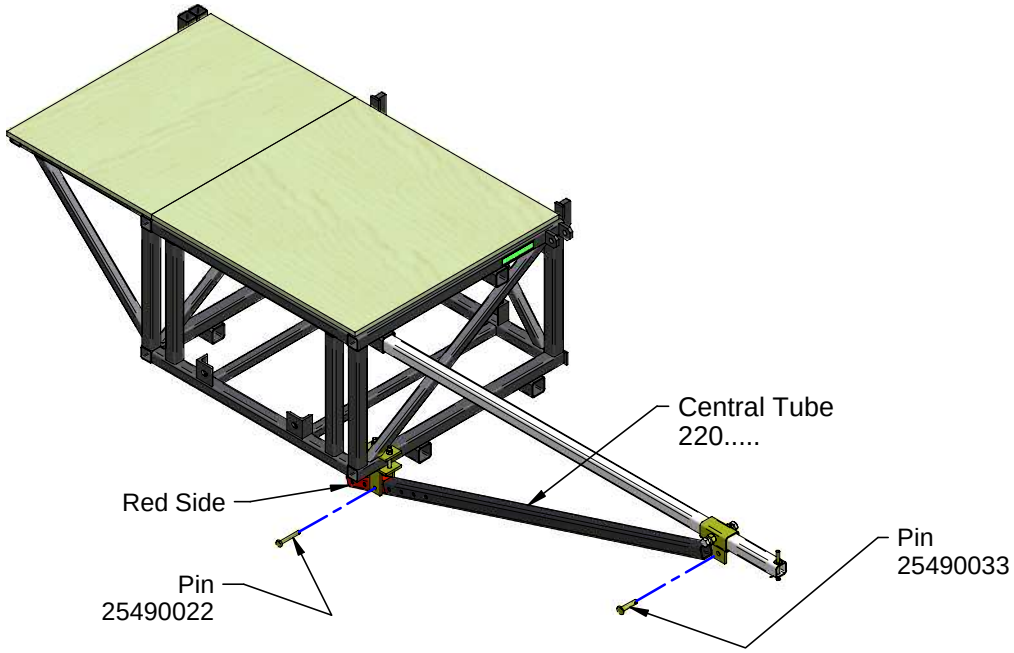
- Install the central tube and insert all the pins.
- Red side of central tube must be pointed to axel tie.
- Tighten the special outrigger tie and the axel tie.

Important :

This installation must be approved by engineers department.



3 **Figure E.15**



4 **Figure E.16**

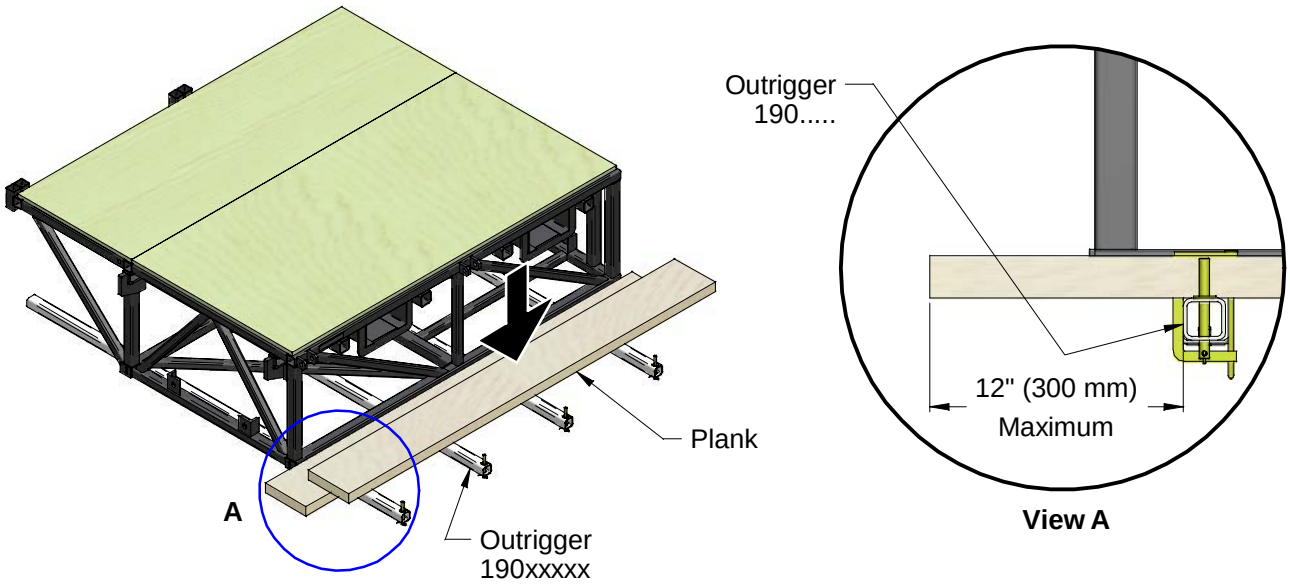
INSTALLATION OF PLANK-TIES AND PLANK-END GUARDRAILS

Step 1 (see Figure E.17)

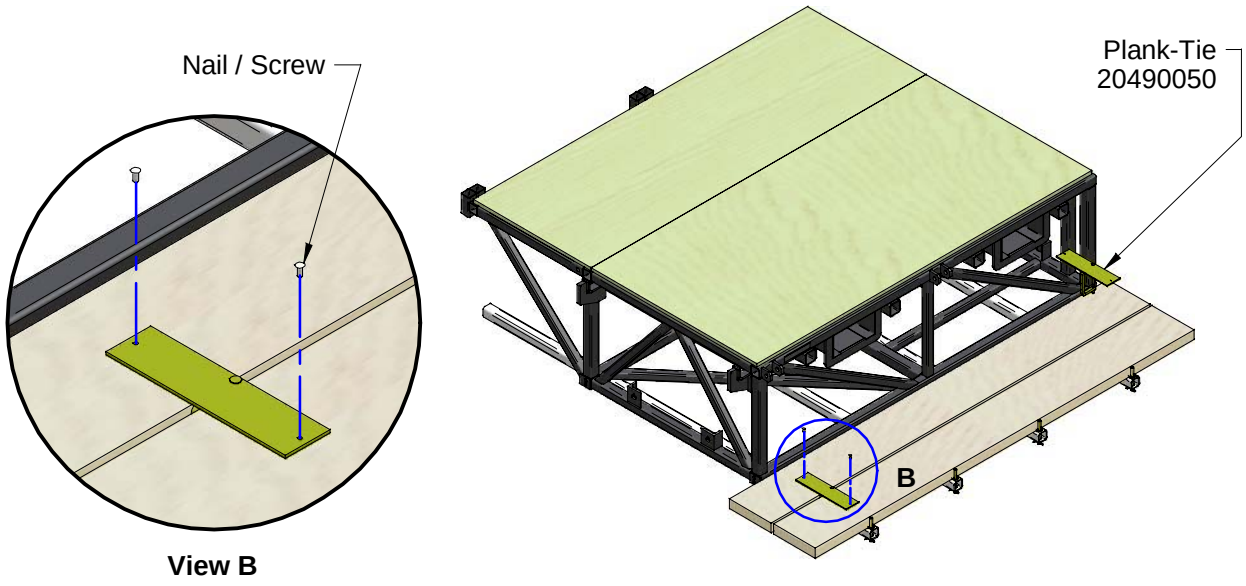
- Place a first plank on the outriggers and push it up against the plynth of the cantilever sections or the bridge sections.
- Install the second plank.
- The planks may not exceed the last outrigger by more than 300 mm.

Step 2 (see Figure E.18)

- Raise the plank-tie nail, insert the plank tie around the outrigger and then replace the nail.
- Place a plank tie around the outriggers located at each extremity.
- Screw or nail the ties to the planks to prevent them from moving.



1 **Figure E.17**



2 **Figure E.18**

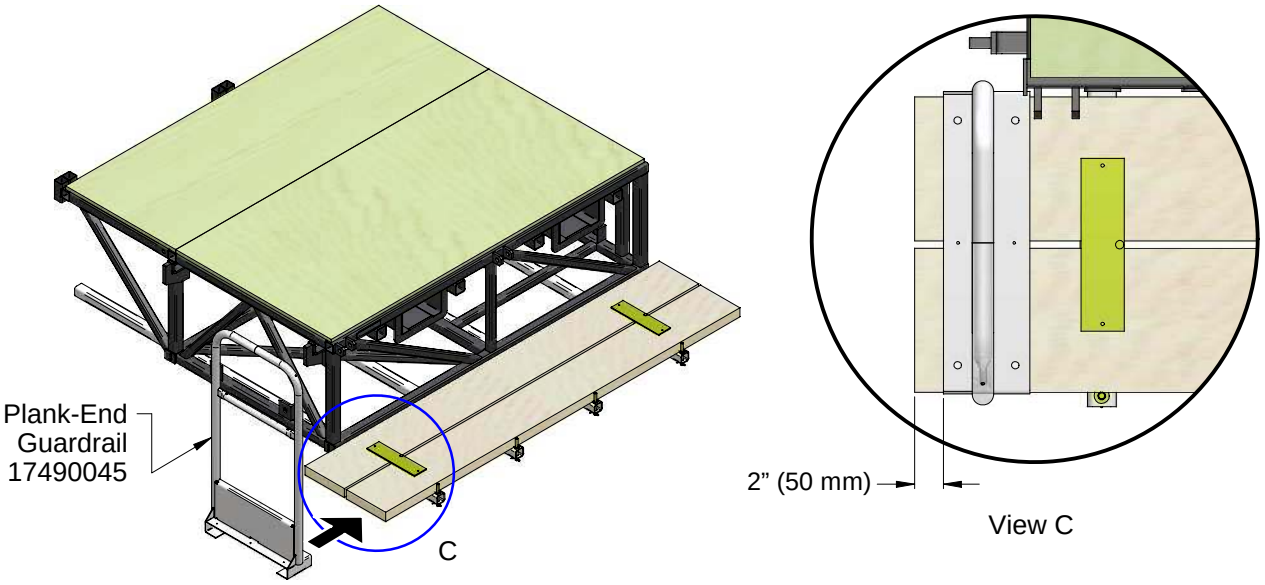
INSTALLATION OF PLANK-TIES AND PLANK-END GUARDRAILS (CONTINUED)

Step 3 (see Figure E.19)

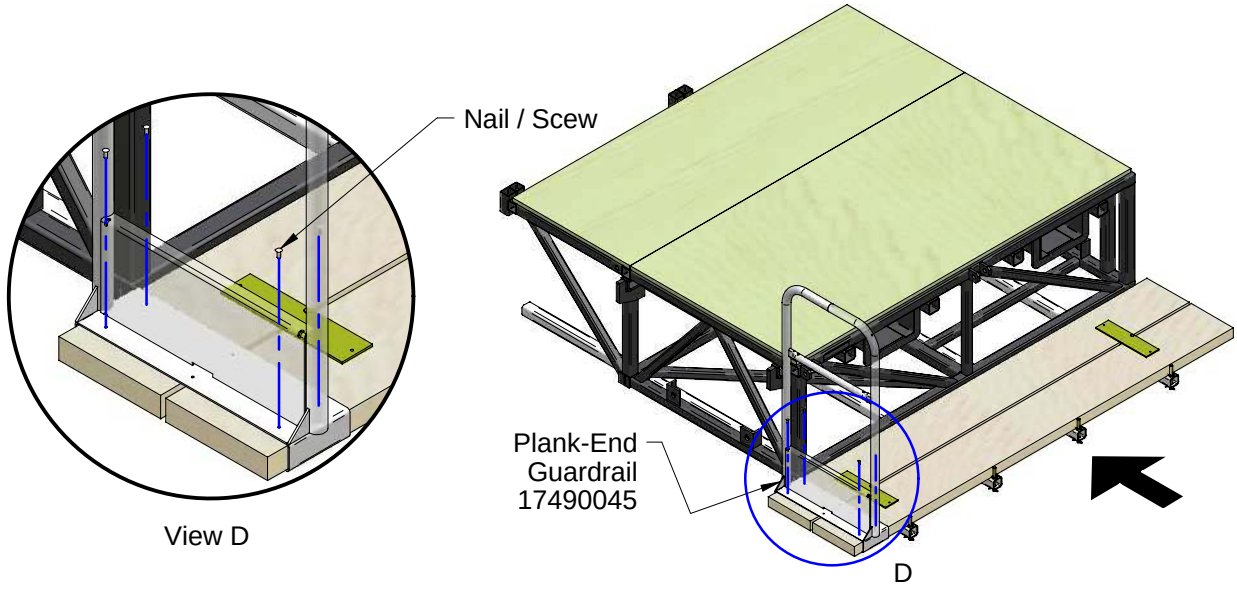
- Install the plank-end guardrails at the extremity of the planks of the work zone.
- There should be a space of about 50 mm between the extremity of the plank and the beginning of the plank-end guardrail.

Step 4 (see Figure E.20)

- Fix the plank-end guardrails with nails or screws.
- Push it up against the plynth of the cantilever sections or bridge sections.
- Place the guardrails wherever there might be a risk of falling.



3 **Figure E.19**



4 **Figure E.20**

ACCESSORIES

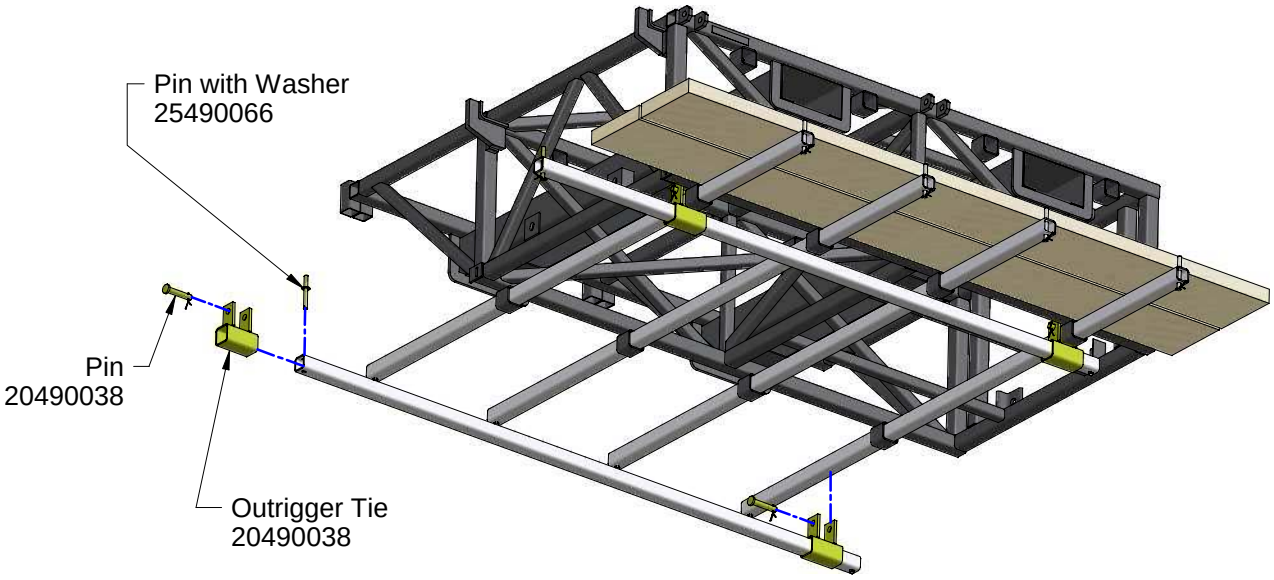
INSTALLATION OF OUTRIGGER SUPPORTS (OPTIONAL)

Step 1 (see Figure E.21)

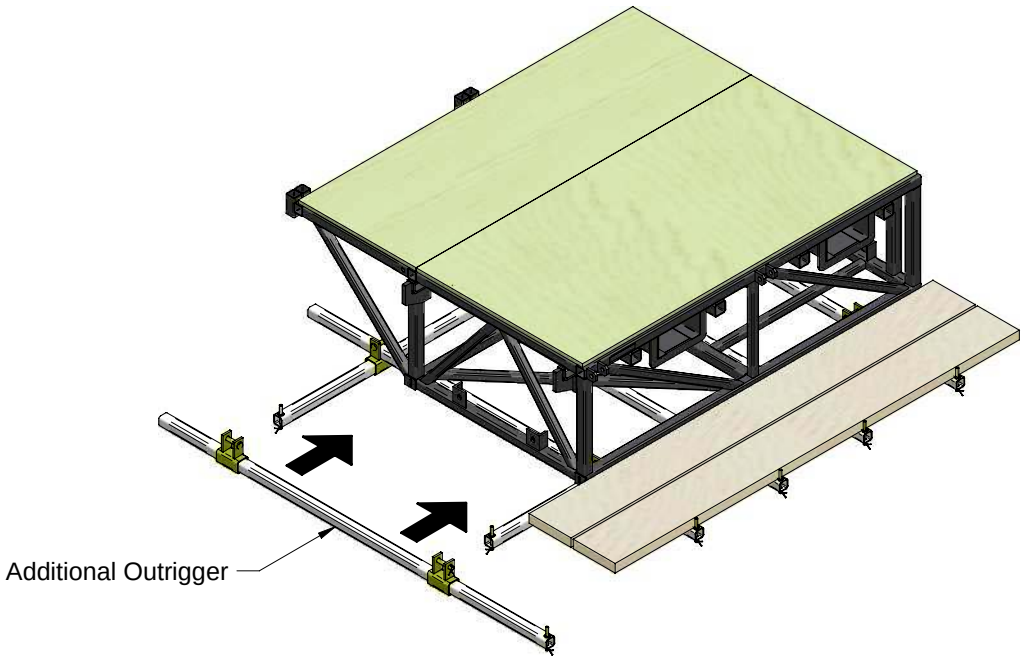
- Install the outrigger ties to an outrigger ((2) two per outrigger).
- The pin must be pointed downwards.
- Install the outriggers with the outrigger ties on the previously installed outriggers.
- Install the pins with washers supplied with the outrigger ties.

Step 2 (see Figure E.22)

- Install an additional outrigger with the outrigger tie at the end of plank.
- Install pin with washer at the end of outrigger.



1 **Figure E.21**



2 **Figure E.22**

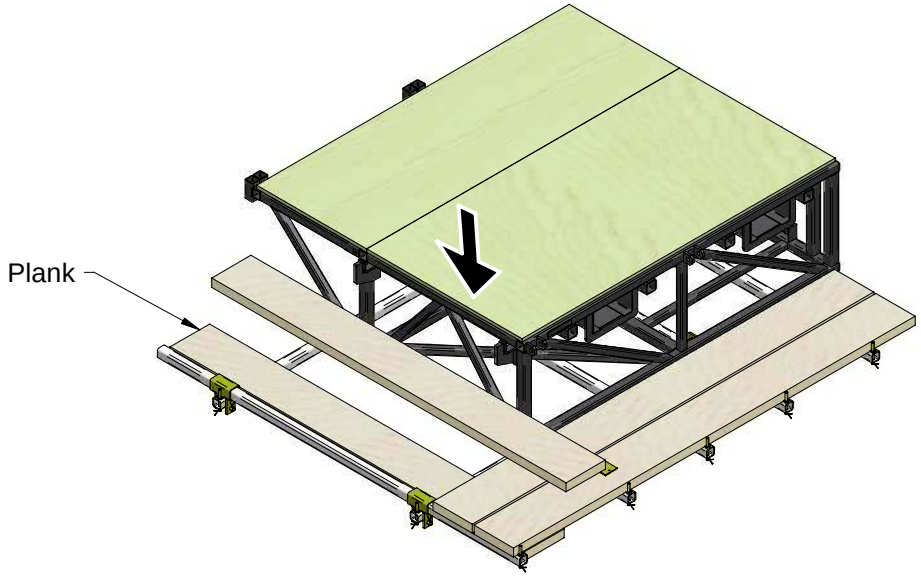
INSTALLATION OF OUTRIGGER SUPPORTS (OPTIONAL) (CONTINUED)

Step 3 (see Figure E.23)

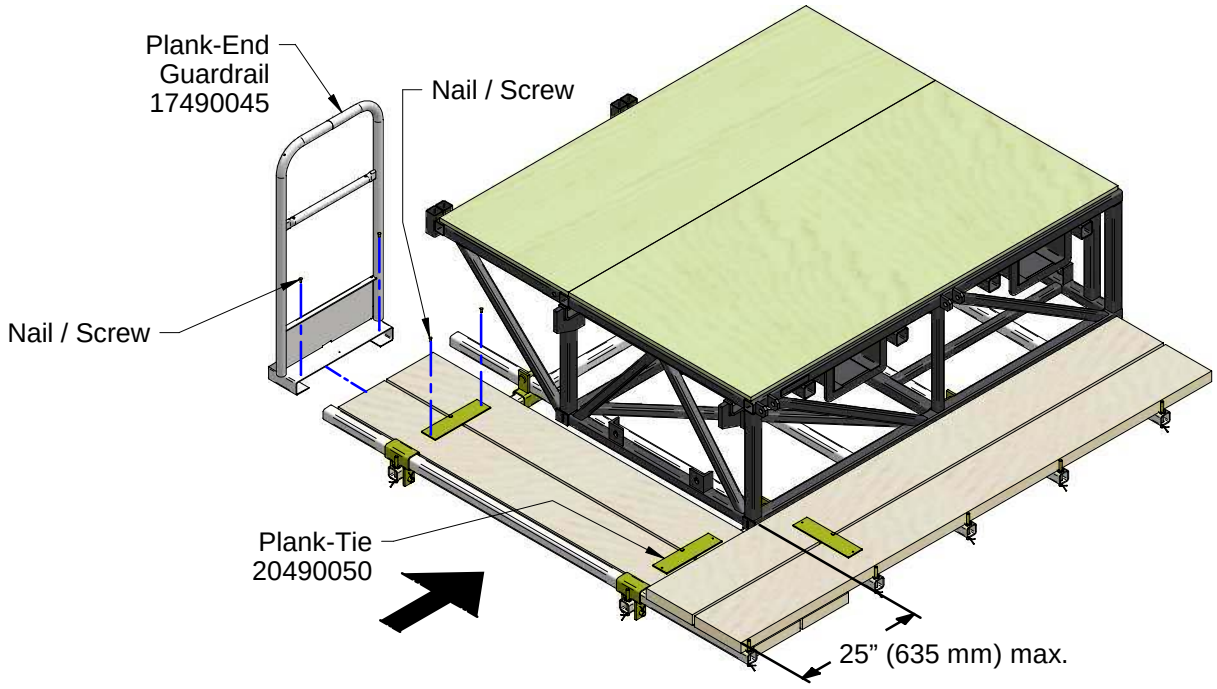
- Place the planks onto the outriggers to enlarge the work area. (the maximal depth is 635 mm)

Step 4 (see Figure E.24)

- Install the plank ties to each end of the planks.
- Install the plank-end guardrails at the end of the planks in the work zone.
- There should be a space of about 50 mm between the extremity of the plank and the beginning of the plank-end guardrail.
- Push the planks up against the side of the platform.
- Fix the plank-end guardrails and the plank ties with nails or screws.



3 **Figure E.23**



4 **Figure E.24**

ACCESSORIES

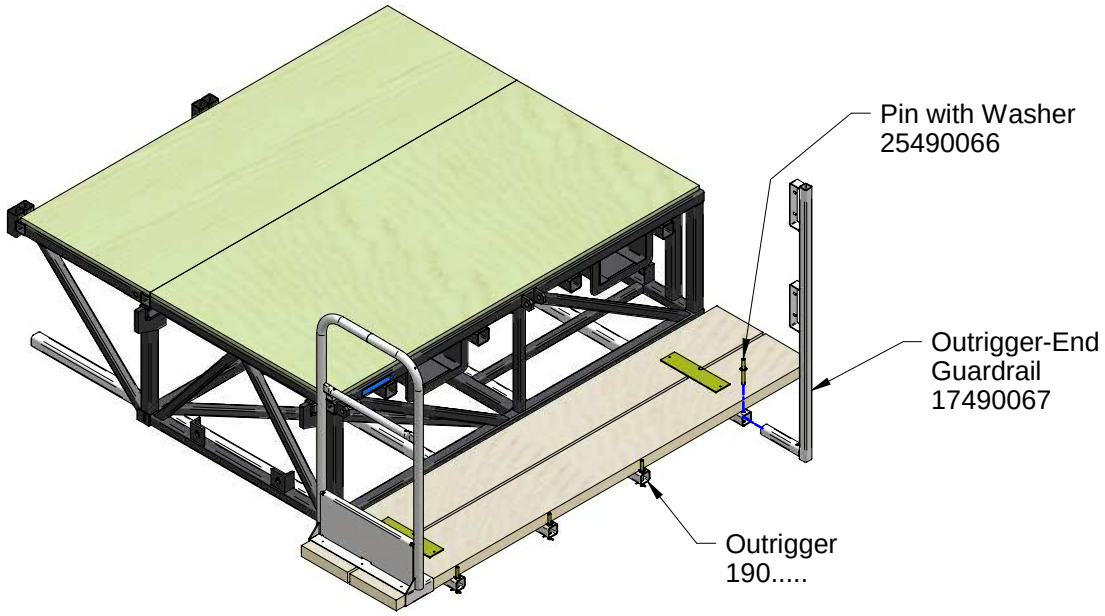
INSTALLATION OF OUTRIGGER-END GUARDRAILS

Step 1 (see Figure E.25)

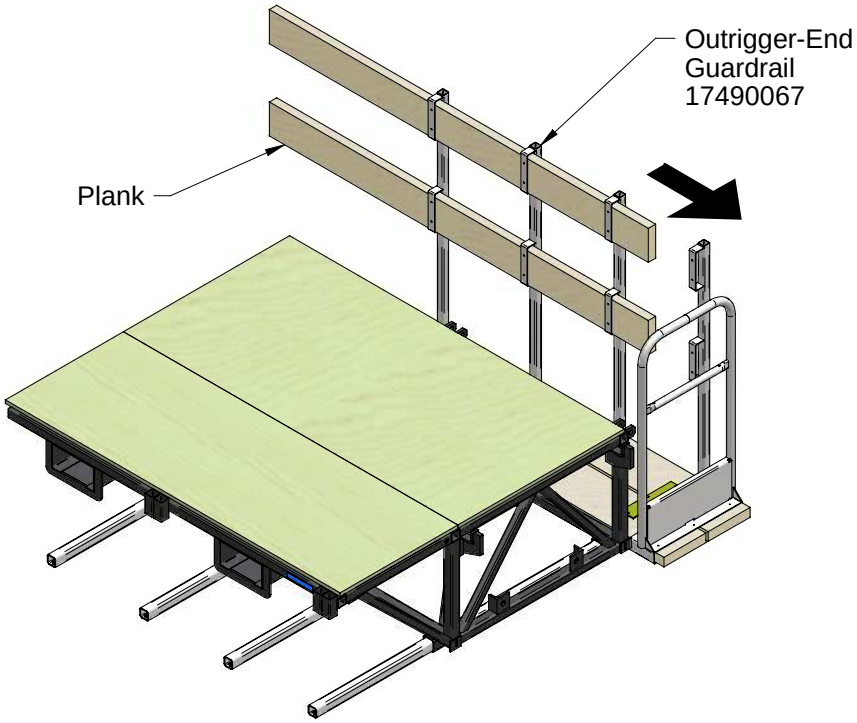
- Install the outrigger-end guardrail onto each previously installed outrigger.
- Fix the outrigger-end guardrails with the pin with washer that are supplied with the outrigger.

Step 2 (see Figure E.26)

- Place the planks onto the outrigger-end guardrails.



1 **Figure E.25**



2 **Figure E.26**

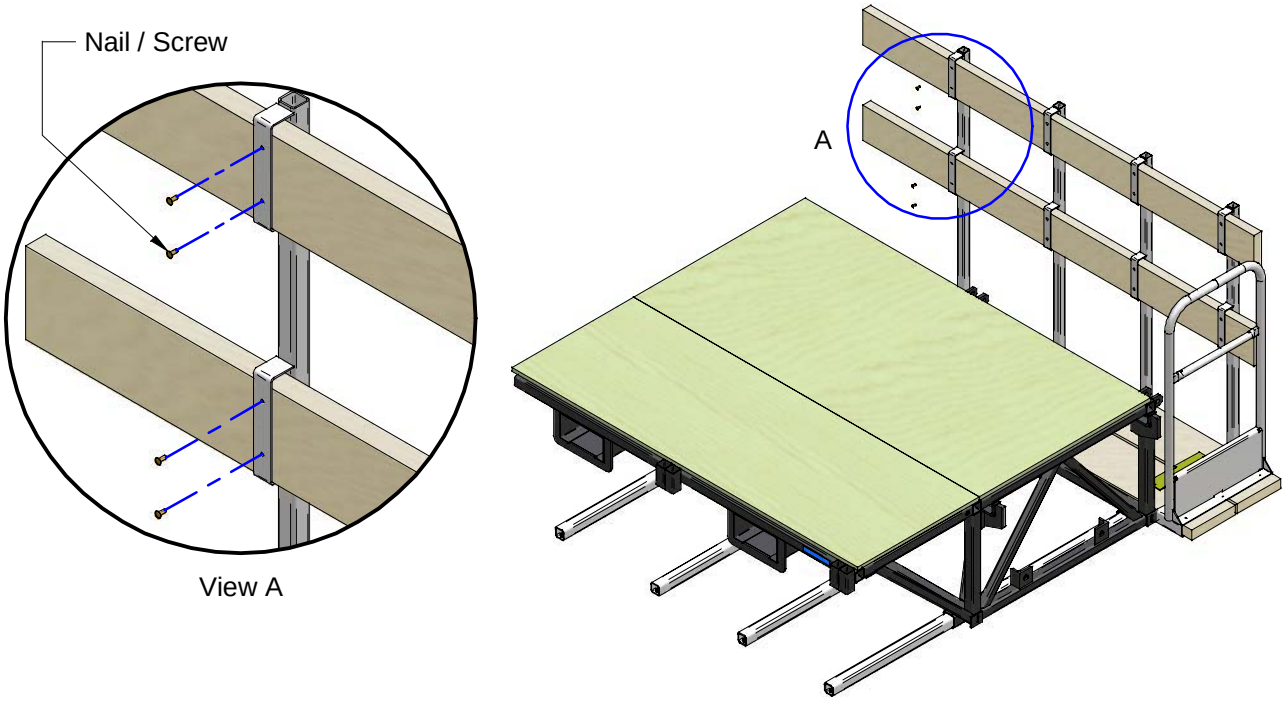
INSTALLATION OF OUTRIGGER-END GUARDRAILS (CONTINUED)

Step 3 (see Figure E.27)

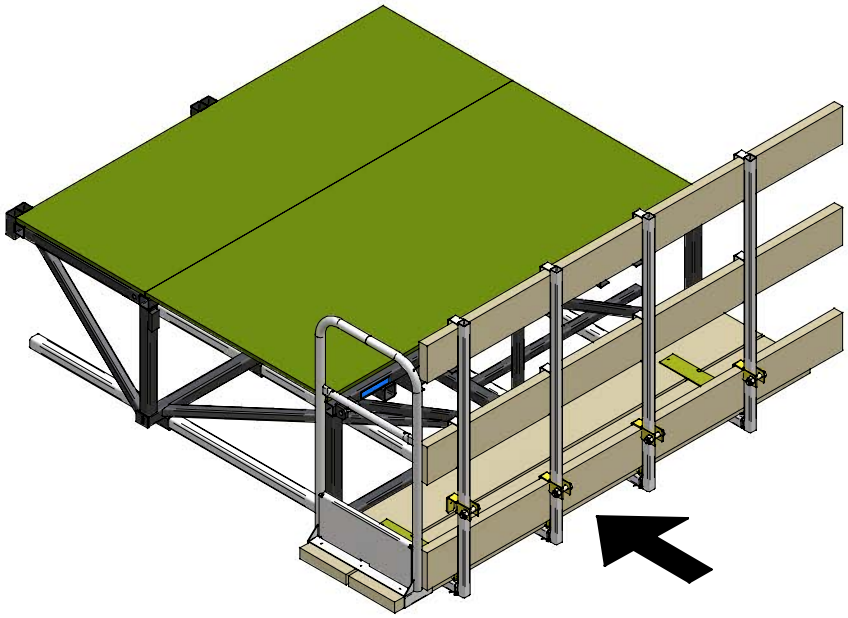
- Fix the planks with screws or nails.

Step 4 (see Figure E.28)

- Push the planks up against the plinth of the platform.



3 **Figure E.27**



4 **Figure E.28**

INSTALLATION OF ANTI-SWIVEL DEVICE (OPTIONAL)

Step 1 (see Figure E.29)

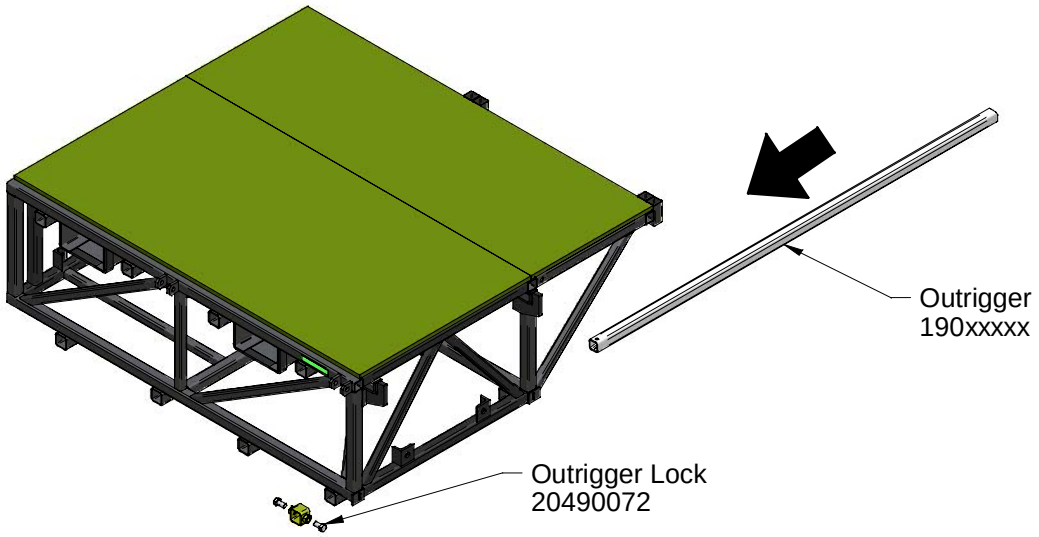
- Insert two (2) outrigger locks on the two outriggers found at each extremity of the platform.

Step 2 (see Figure E.30)

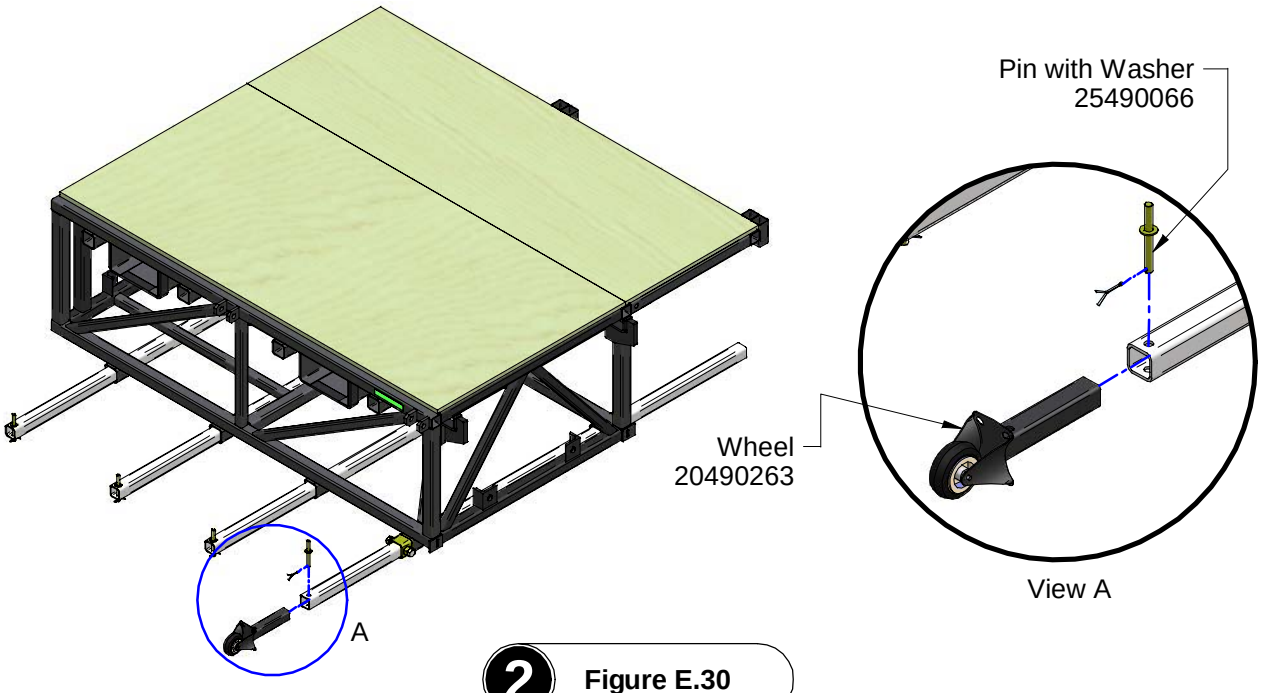
- Insert two (2) wheel into each outrigger having outrigger locks.
- Seciure the wheels to the outrigger using the pin with washer supplied with the outrigger.
- Push the whole assembly against the platform.
- Adjust the outrigger length according to the distance from the finished wall and the contact point of the wheel to the wall.
- Tighten the bolts of the outrigger lock.

Important :

Install anti-swivel devices on single mast configurations.



1 **Figure E.29**

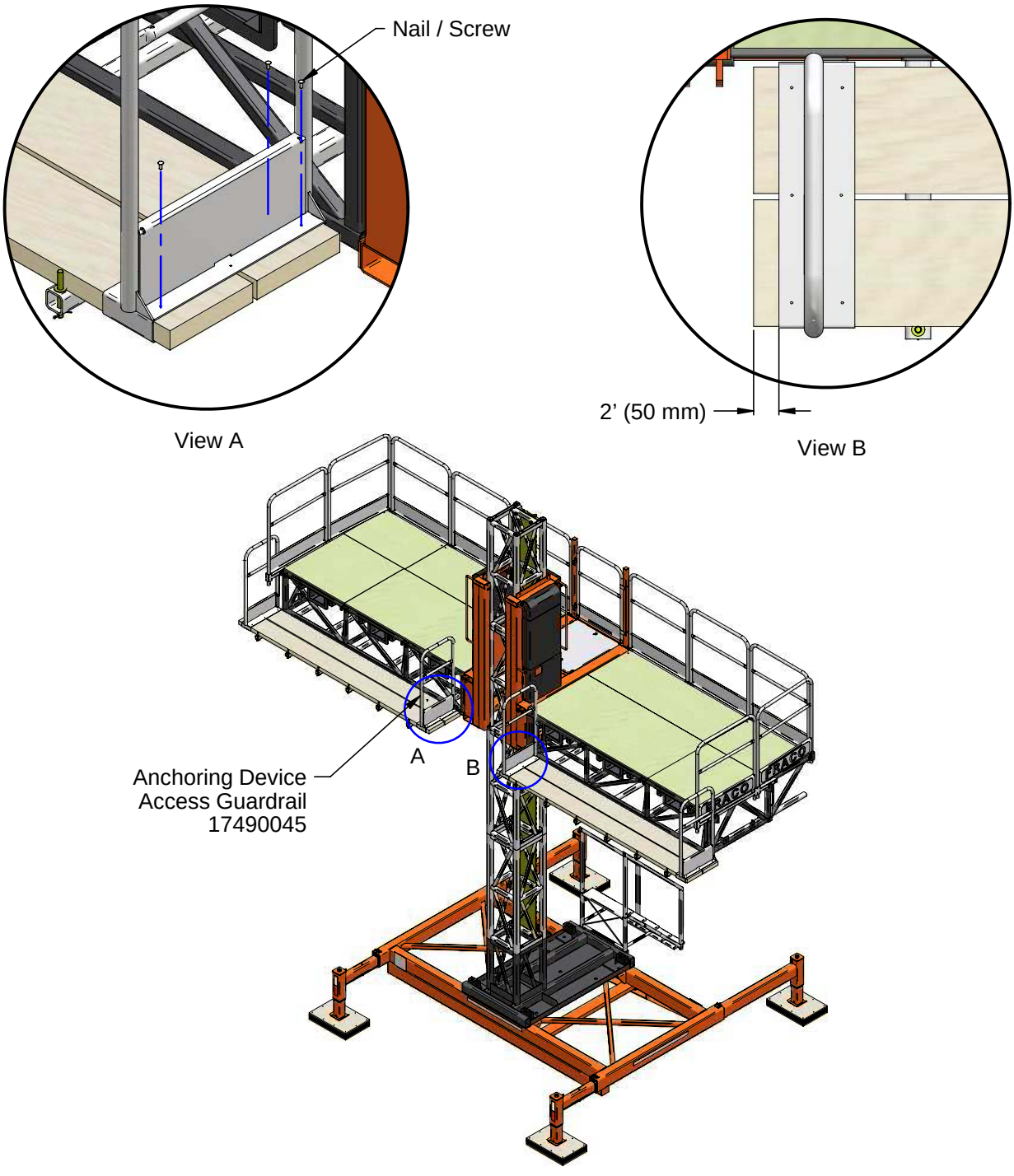


2 **Figure E.30**

INSTALLATION OF ANCHORING DEVICE ACCESS GUARDRAILS

Anchoring Device Access Guardrail (see Figure E.31)

- After having installed the anchoring devices, you must install anchoring device access guardrails to block access to the anchoring devices during movements.
- Installing the anchoring device access guardrails at the end of the planks facing the anchoring devices.
- There must be a space of about 50 mm between the end of the plank and the beginning of the guardrail for access to the anchoring devices.
- Attach the guardrails to the end of the plank with nails or screws.



1 **Figure E.31**

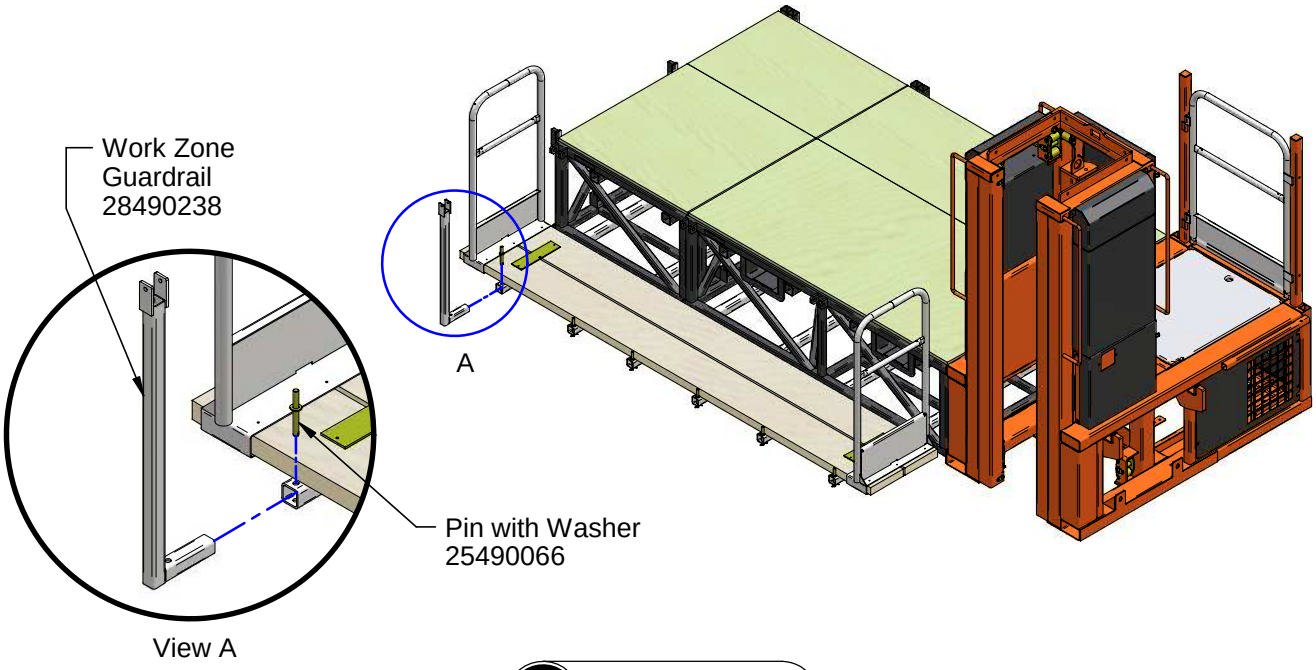
INSTALLATION OF WORK AREA GUARDRAILS

Step 1 (see Figure E.33)

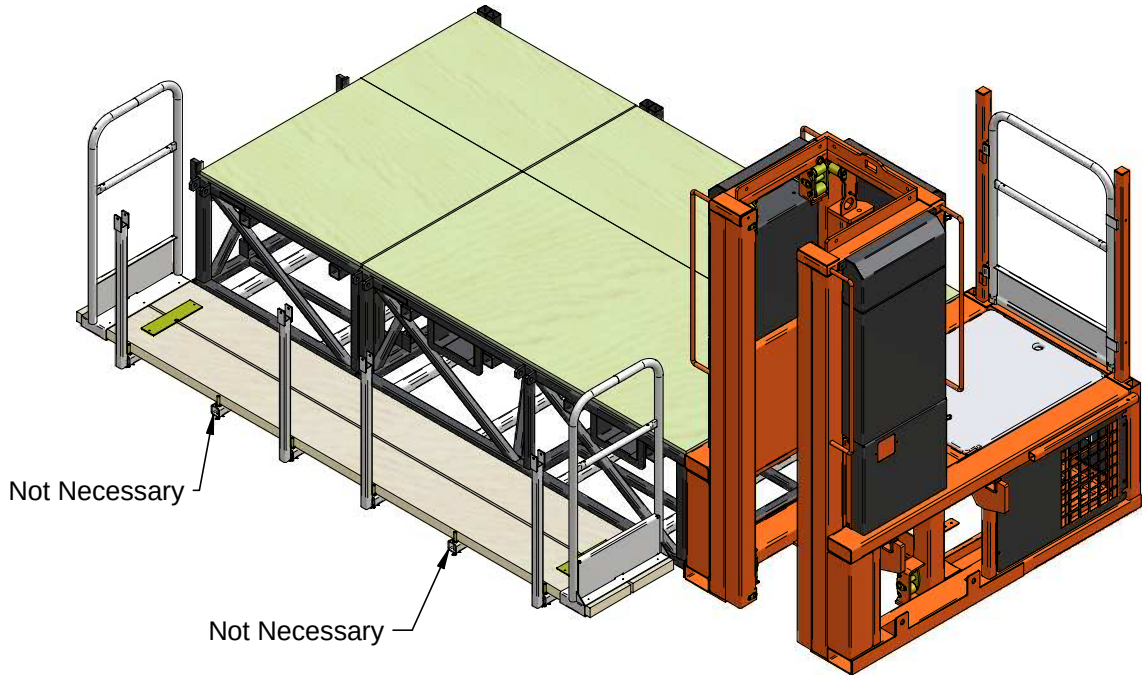
- Attach the work zone guardrail with the help of the pin with washer which is provided with the outrigger.

Step 2 (see Figure E.34)

- Install the work zone guardrail on each spar necessary for the installation of the handrails.



1 **Figure E.32**



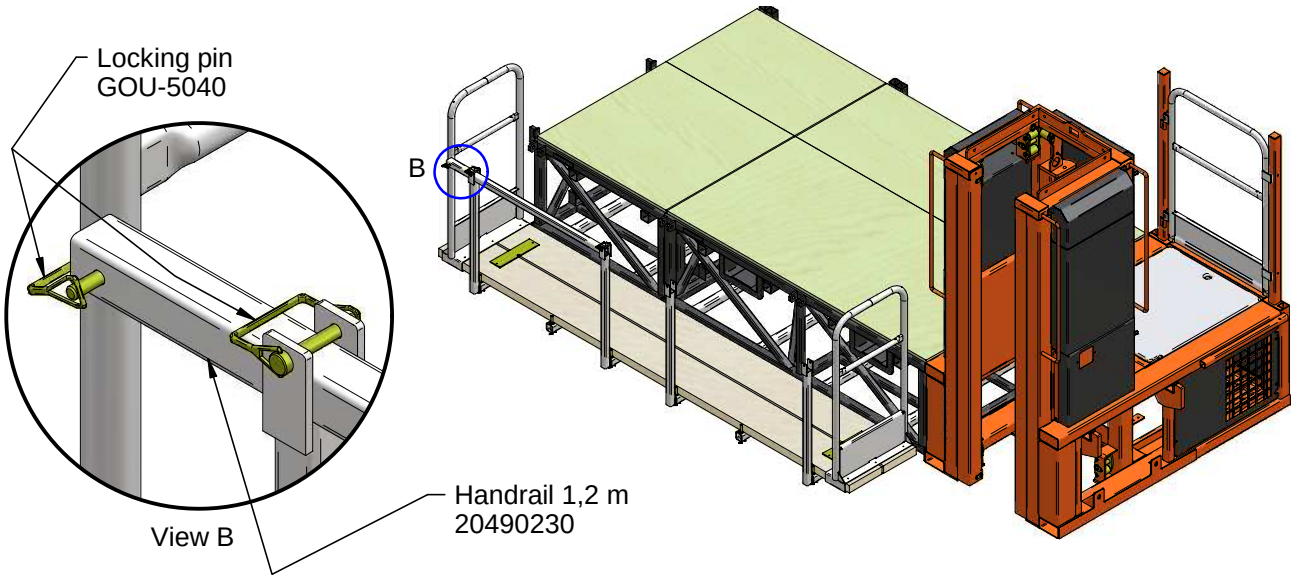
2 **Figure E.33**

Step 3 (see Figure E.35)

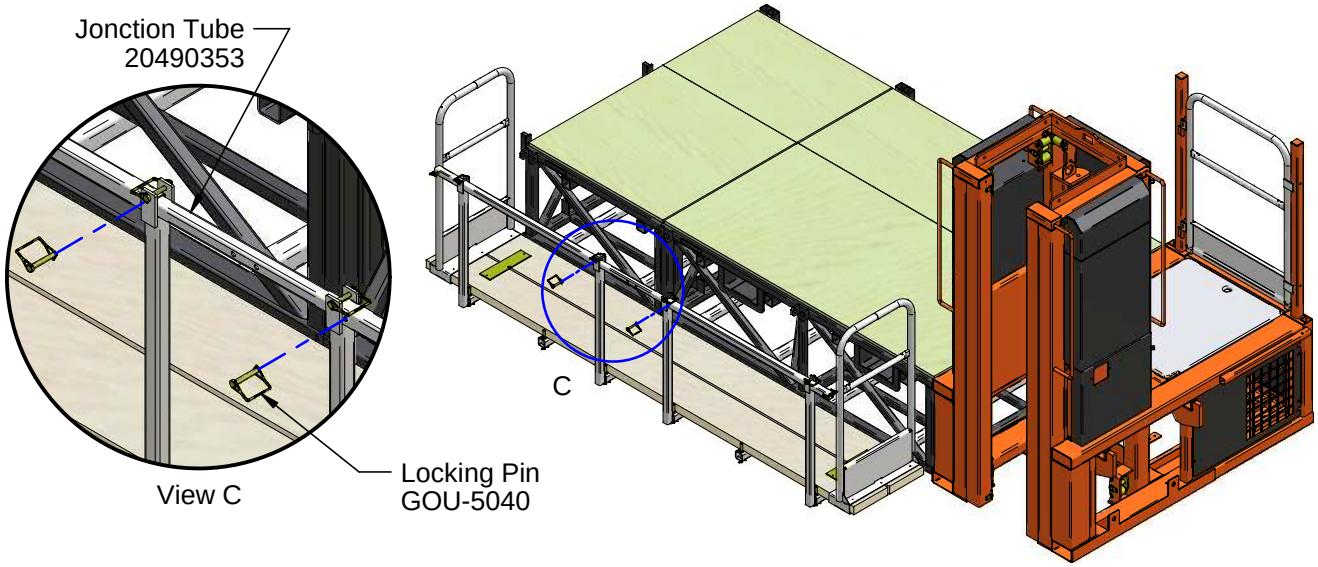
- Place the handrails on the work zone guardrails.
- Lock the handrails with the locking pins.
- You can also use 2,4 m hand rails.

Step 4 (see Figure E.36)

- Join the handrails together with a junction tube and also (2) two locking pins.



3 **Figure E.34**



4 **Figure E.35**

INSTALLATION OF ACT DESCENT LIMITING DEVICE (OPTIONAL)

ACT Descent Limiting Device (see Figure E.36)

- To the positon you want to stop the machine, place the ACT descent limiting device into the mast section. The bumper must be pointed upwards.
- Lock the ACT descent limiting device with the pins.

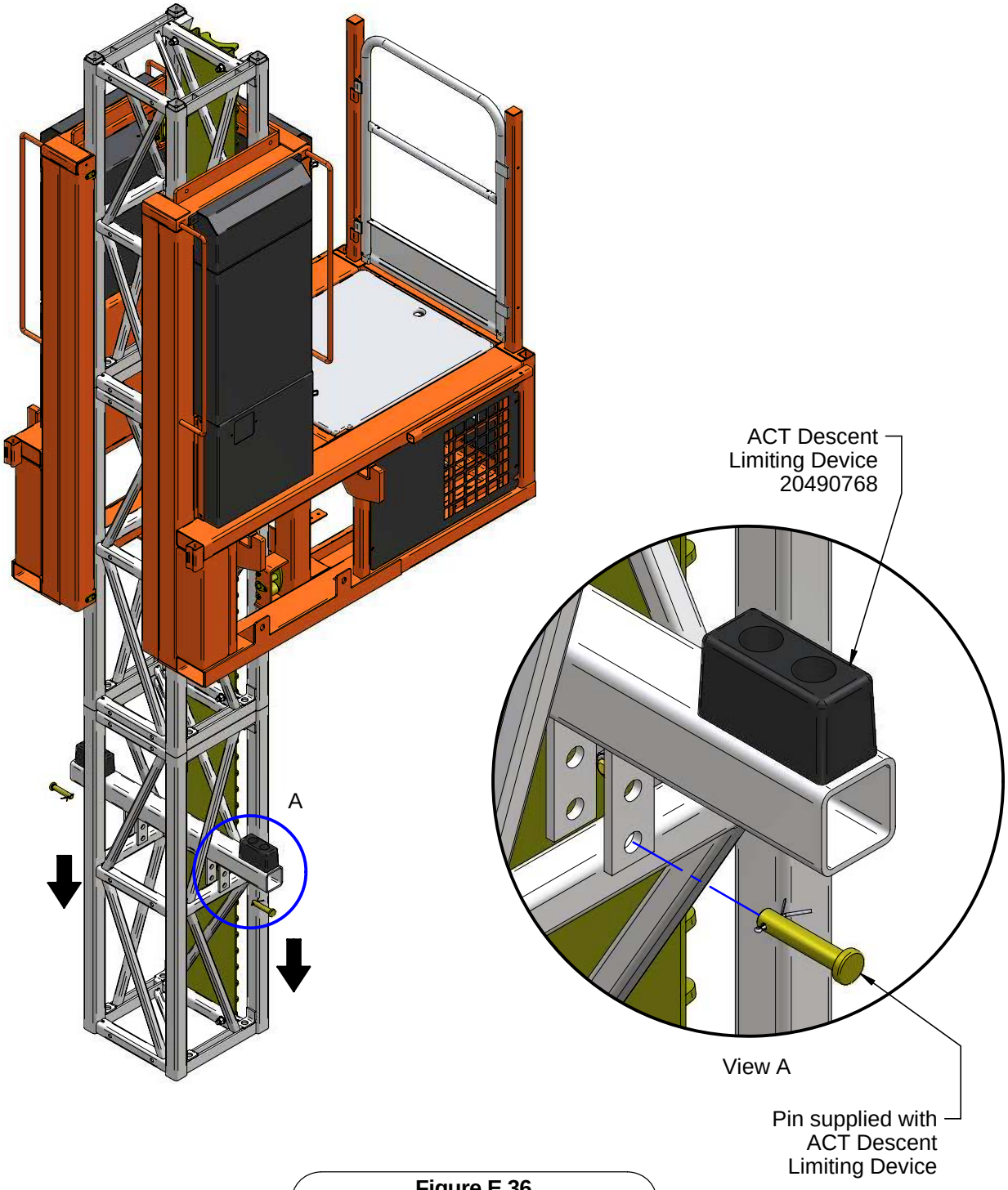


Figure E.36
ACT Descent Limiting Device

INSTALLATION OF ANTI-PIVOT DEVICE WITH BIG WHEEL (OPTIONAL)

Step 1 (see Figure E.37)

- Install the support for single mast blocking system wheel into the attach in front of the platform.
- Lock the single mast blocking system wheel with the pin.

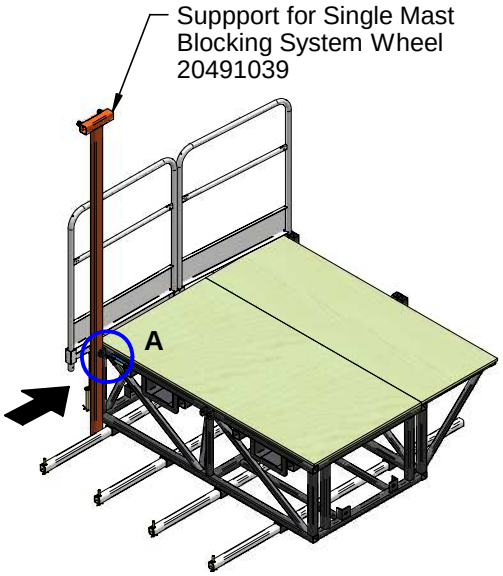
Step 2 (see Figure E.38)

- Slide the wheel for single mast blocking system into the tube of the single mast blocking system wheel.

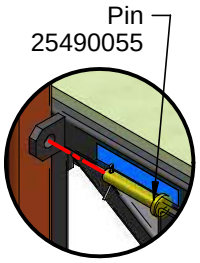
Step 3 (see Figure E.39)

- Adjust the wheel for single mast blocking system on the anchor wall. You must leave a minimum 50 mm.
- After the adjustment, tighten the bolts.
- Add another single mast blocking system wheel kit on the opposite site of the platform.
- This wheel can also be used under the platform. You must be adjusted with finished wall.

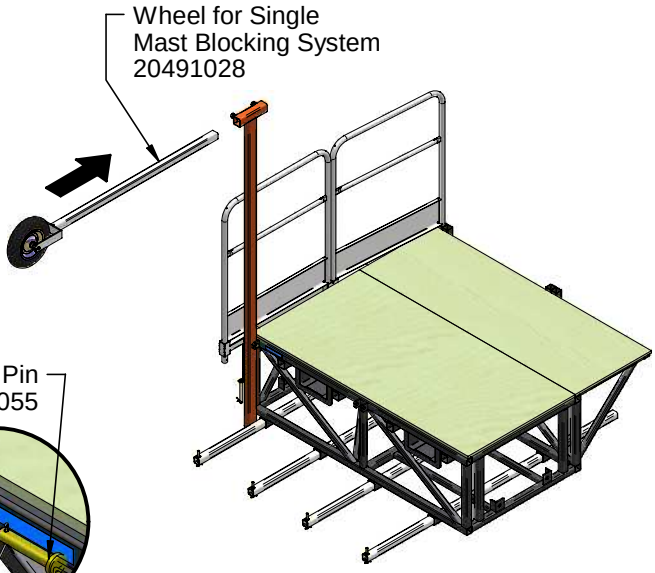
.



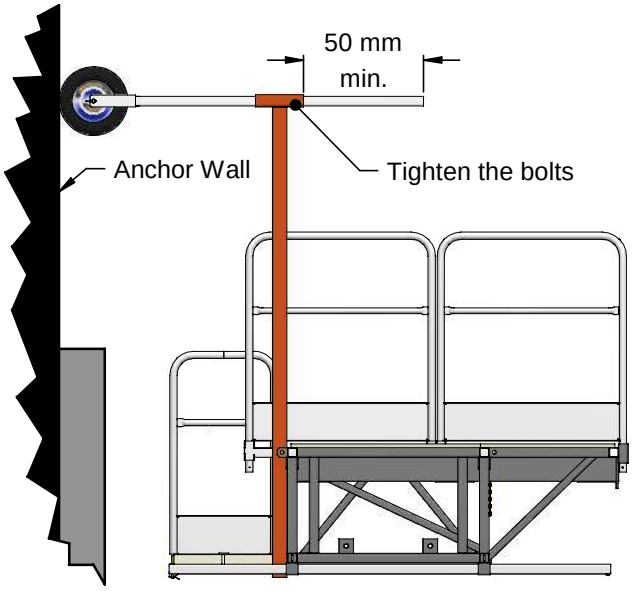
1 **Figure E.37**

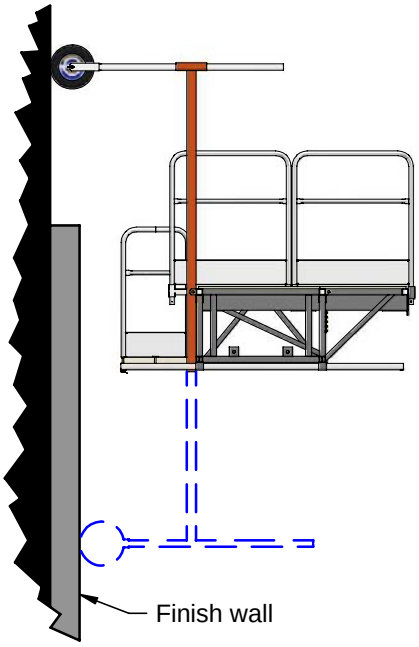


View A



2 **Figure E.38**





ACCESSORIES

NOTE: