

installation instructions

Single: 7001003
Double: 7001002

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Air Delivery System



The Molnar Hoists Air Delivery System has been designed as an integrated system specifically to supply compressed air to either 1 (Single) or 2 (Double) JB11 Air Jacking Beams fitted to any existing Molnar 4 Post hoist.

All fittings are provided to allow for compressed air to be supplied at any 1 of the 4 posts. Quickly and easily fitted, the Air Delivery System is the optimal solution for safe efficient air supply for Molnar JB11 units.

CONTENTS

INTRODUCTION	2
TOOL LIST	2
NOTES.....	2
PARTS & SCHEMATIC FOR 7001003: AIR DELIVERY SYSTEM, SINGLE	3
PARTS & SCHEMATIC FOR 7001002: AIR DELIVERY SYSTEM, DOUBLE	4
POST CONFIGURATIONS	5
CONTROL POST 1 INSTALLATION	5
POST 2 INSTALLATION.....	6
POST 3 INSTALLATION.....	7
POST 4 INSTALLATION.....	8
MOUNTING THE FILTER REGULATOR LUBRICATOR (FRL)	9
MOUNTING BULKHEAD BRACKET	10
DRILLING FOR WIRE ROPE ASSEMBLY.....	11
MOUNTING TUBE CLAMPS	12
MOUNTING GUARD PLATE.....	13
JACKING BEAM CONFIGURATIONS	14
SINGLE JACKING BEAM INSTALLATION	14
DOUBLE JACKING BEAM INSTALLATION	14
DRILLING JACKING BEAMS	15
ATTACHING JACKING BEAM COMPONENTS:	16
ATTACHING JACKING BEAM 'A' COMPONENTS.....	16
ATTACHING JACKING BEAM 'B' COMPONENTS	17
FITTING WIRE ROPE ASSEMBLY	18
FITTING COILED HOSES	18
COMMISSIONING	19
MAINTENANCE.....	19
INSTALLATION RECORD.....	20

INTRODUCTION

The Molnar Hoists Air Delivery System (Single/Double) can be installed for feed in supply at any one of the four posts of a Molnar 4 Post hoist, entry at the control post (post number 1) being the default location. 2 Kit types are available; 7001003 Single kit is for single air jacking beam installations and the 7001002 Double kit suits double jacking beam installations. The design and layout of the system allows for an easy upgrade to a double kit at a later stage if desired. The layout supplies air to the jacking beam(s) via coiled hoses that run along under the inside lip of the left hand platform (non-control side). The instructions are written based upon the controls of the air jacking beam(s) facing inwards to the centre of the hoist, however, the fittings provided can be rearranged to suit.

TOOL LIST

The minimum specific tools required are listed here.

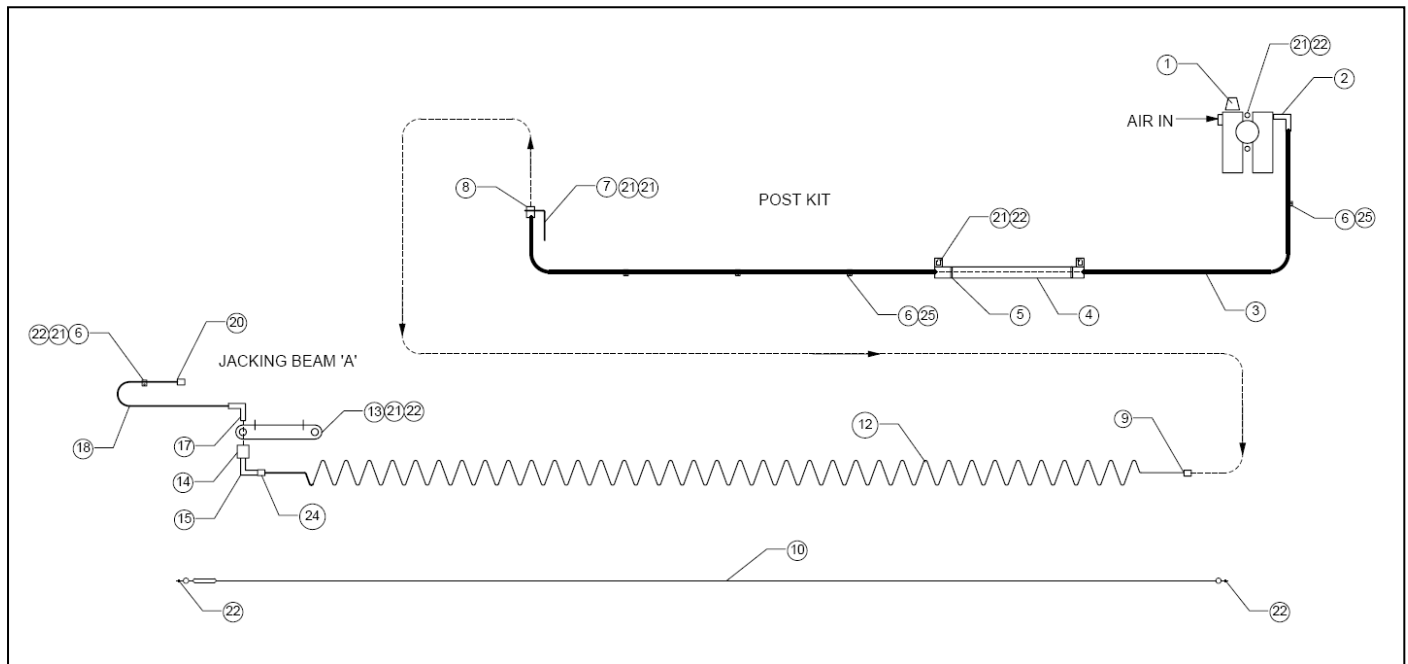
- 1) Electric Drill
- 2) M3 drill
- 3) 8mm Hex (Tek Screw) Driver Bit
- 4) M7 drill
- 5) 4mm Allen Key
- 6) Spanner Set
- 7) Measuring Tape
- 8) Tube Cutter/Knife (cuts to tube must be straight, clean and perpendicular to hose)
- 9) Thread Tape

NOTES

- Use caution when operating with compressed air, ensure all fittings are connected and tight before energising system. Follow safe working procedures when installing and testing system.
- For the Air Jacking Beams to function correctly, the pump must be lubricated and supplied with clean dry air at a minimum of 100 psi (7 bar) at 7.6 cfm. During operation (when air is flowing), the Air Jacking Beam pump must receive 100 psi minimum, to achieve this, the pressure under flow at the Filter Regulator Lubricator (FRL) must measure at least 130psi (9 bar).
- It is the customer's responsibility to supply the compressed air line and fittings to the point of the inlet port on the FRL unit. The inlet port on the FRL unit is a ¼" BSP Tapered.
- For optimal sealing on push-fit fittings, ensure the hose cut is clean, straight and perpendicular to the hose.
- Air pre-treatment oiler should be filled with oil and regularly drained as part of maintenance. Fill oiler before first operation with a general air tool oil.
- The components to be attached can be used as templates for drilling bolt holes in retrofit installations.
- When connecting fittings, it is advisable to use thread tape to ensure a proper seal. Ensure when using thread tape it is wound on in the correct direction for a proper seal.
- When cutting hoses to length, be sure to leave some excess at first then test. This will allow you to trim down to fine tune the fitment of the hose.
- References of item numbers denoted with the hash symbol (#) and refer to the item number from the schematics and parts lists.

PARTS & SCHEMATIC FOR 7001003: AIR DELIVERY SYSTEM, SINGLE

The 7001003 Single kit for use with a single Air Jacking Beam installed on a Molnar 4 Post Hoist.

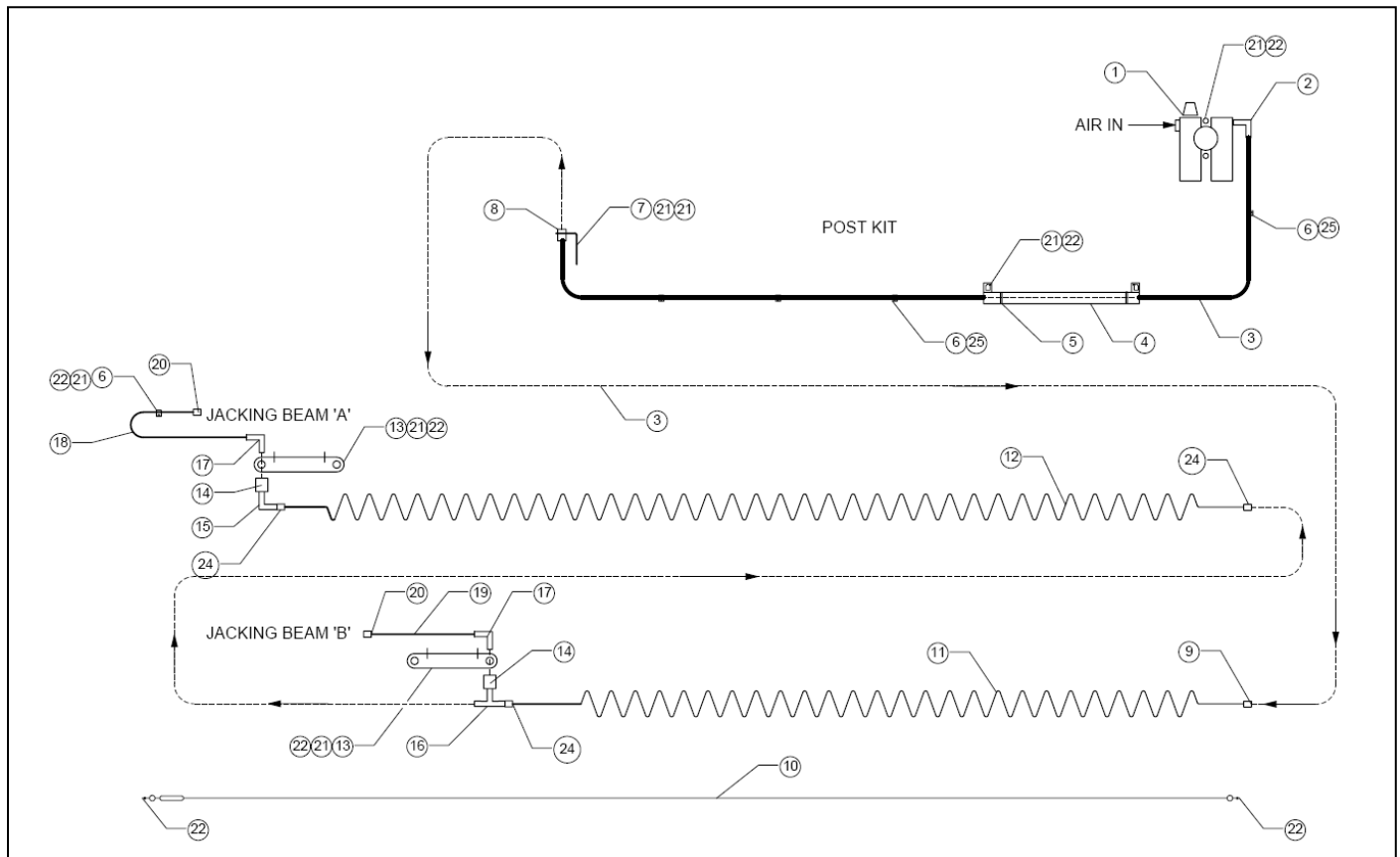


Item No.	Molnar Hoists Part Number	Single Kit Qty	Description
1	44A-25-001	1	Filter, Regulator, Lubricator (FRL)
2	44A-25-002	1	12mm X 1/4" BSPT Pushfit Elbow
3	44A-25-003	1	12mm Navy Blue Tube (10m Roll Straight Tube, to be cut to length on install)
4	94A-31-002_1-D	1	Guard Plate, Air Delivery Kit
5	44A-25-004	2	150 mm Black Cable Tie
6	44A-25-005	4	12mm Tube Clamp (P Clip)
7	44A-17-009_1-D	1	Bulkhead Angle Bracket
8	44A-25-006	1	Pushfit 12mm female bulkhead 1/4" BSP Male
9	44A-25-007	1	Compression Straight 12mm PUR x 1/4" BSP Male
10	44A-25-008	1	3mm Galvanised Wire Rope Assembly
11	N/A	N/A	N/A
12	44A-25-010	1	12 x 8 x 6M Spiral Tube, Navy Blue
13	44A-17-011_1-A	1	Jacking Beam Adaptor Bracket 3/8" BSP
14	44A-25-011	1	3/8" BSP Female Bulkhead Fitting
15	44A-25-012	1	3/8" BSPT M/F Brass Elbow
16	N/A	N/A	N/A
17	44A-25-014	1	12mm x 3/8" BSPT Pushfit Extended Elbow
18	Ref Item 3	1	12mm Navy Blue Tube, Cut to Length (suit single jacking beam installation)
19	N/A	N/A	N/A
20	44A-25-015	1	12mm x 1/4" BSPT Pushfit Straight
21	44A-25-016	10	M6 x 16 Round Head Hex Drive ZP
22	44A-25-017	12	M6 Hex ZP
23	44A-25-018	4	12mm Girder Clips
24	44A-25-019	1	Compression Straight 12x8mm x 3/8" BSPF PUR
25	44A-25-020	4	8 x 16 Self Drilling Tek Screw ZP

By purchasing an Auxiliary Kit, a Single Kit may be upgraded to a double kit at any later stage.

PARTS & SCHEMATIC FOR 7001002: AIR DELIVERY SYSTEM, DOUBLE

The 7001002 Double kit for use with twin Air Jacking Beams installed on a Molnar 4 Post Hoist.

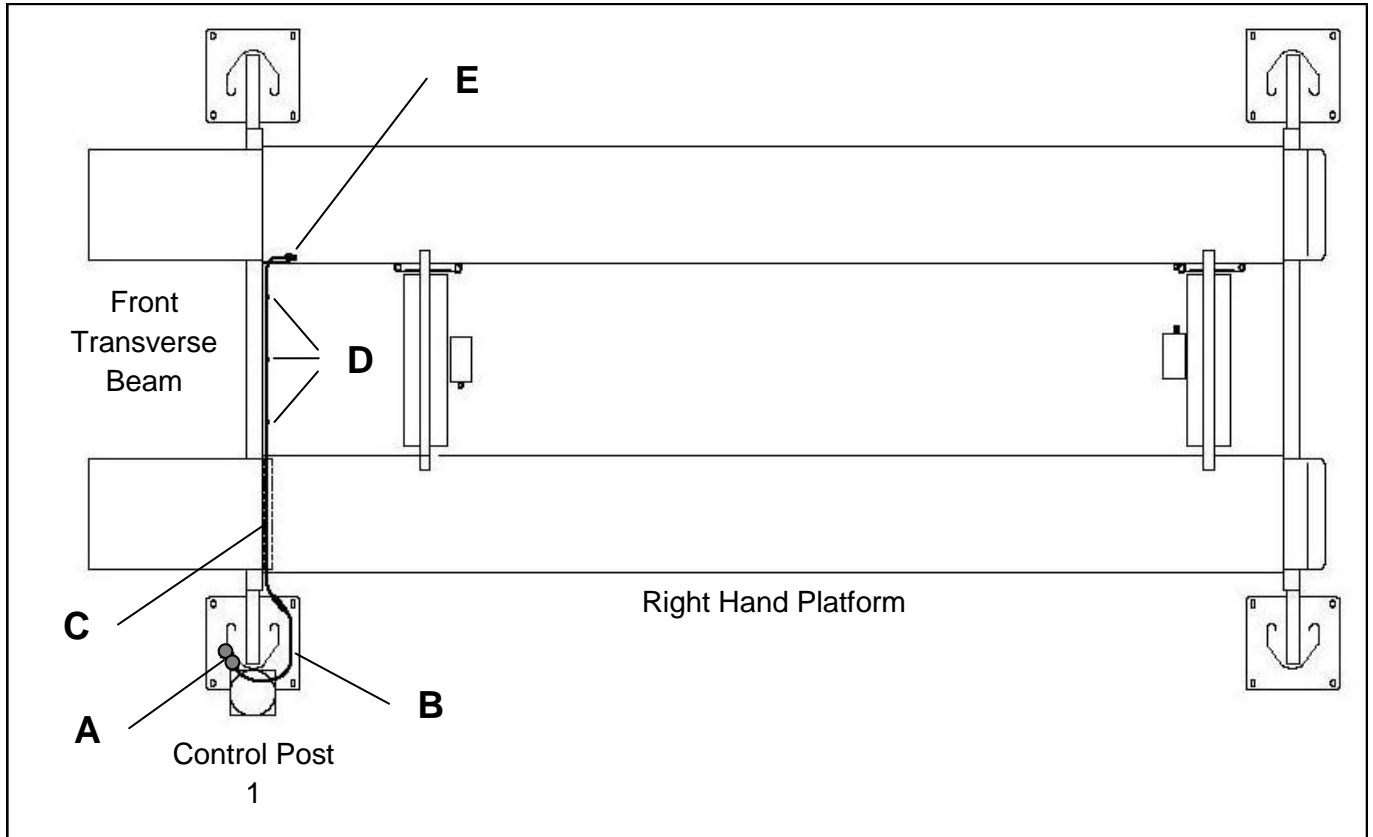


Item No.	Molnar Hoists Part Number	Double Kit Qty	Description
1	44A-25-001	1	Filter, Regulator, Lubricator (FRL)
2	44A-25-002	1	12mm X 1/4" BSPT Pushfit Elbow
3	44A-25-003	1	12mm Navy Blue Tube (10m Roll Straight Tube, to be cut to length on install)
4	94A-31-002_1-D	1	Guard Plate, Air Delivery Kit
5	44A-25-004	2	150 mm Black Cable Tie
6	44A-25-005	5	12mm Tube Clamp (P Clip)
7	44A-17-009_1-D	1	Bulkhead Angle Bracket
8	44A-25-006	1	Pushfit 12mm female bulkhead 1/4" BSP Male
9	44A-25-007	1	Compression Straight 12mm PUR x 1/4" BSP Male
10	44A-25-008	1	3mm Galvanised Wire Rope Assembly
11	44A-25-009	1	12 x 8 x 4M Spiral Tube, Navy
12	44A-25-010	1	12 x 8 x 6M Spiral Tube, Navy
13	44A-17-011_1-A	2	Jacking Beam Adaptor Bracket 3/8" BSP
14	44A-25-011	2	3/8" BSP Female Bulkhead Fitting
15	44A-25-012	1	3/8" BSPT M/F Brass Elbow
16	44A-25-013	1	3/8" BSP Male Run Tee
17	44A-25-014	2	12mm x 3/8" BSPT Pushfit Extended Elbow
18	Ref Item 3	1	12mm Navy Blue Tube, Cut to Length (suit single jacking beam installation)
19	Ref Item 3	1	12mm Navy Blue Tube, Cut to Length (suit second jacking beam installation,
20	44A-25-015	2	12mm x 1/4" BSPT Pushfit Straight
21	44A-25-016	12	M6 x 16 Round Head Hex Drive ZP
22	44A-25-017	14	M6 Hex ZP
23	44A-25-018	4	12mm Girder Clips
24	44A-25-019	3	Compression Straight 12x8mm x 3/8" BSPF PUR
25	44A-25-020	4	8 x 16 Self Drilling Tek Screw ZP

POST CONFIGURATIONS

Each of the 4 post configurations are shown, the post configuration type is independent of the number of jacking beams.

CONTROL POST 1 INSTALLATION



- A. Fit FRL (#1&2) to Control Post 1 (see mounting FRL instructions)
- B. Run straight hose (#3) from FRL (#1&2) to bulkhead (#8&9), wrapping hose around hydraulic line to secure. See photo for wrapping example.
- C. Mount Guard Plate (#4&5) under the front of the right hand side platform (see Guard mounting instructions)
- D. Drill and mount tube clamps (3 x #6&25) to inside face of front transverse beam (see Transverse Drilling instructions)
- E. Connect and trim hose between FRL and bulkhead

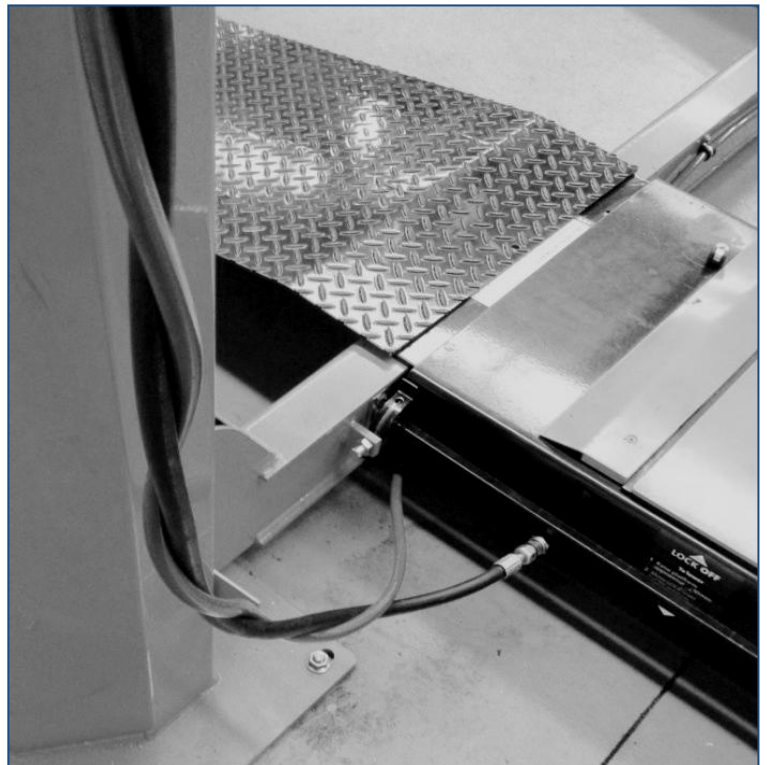
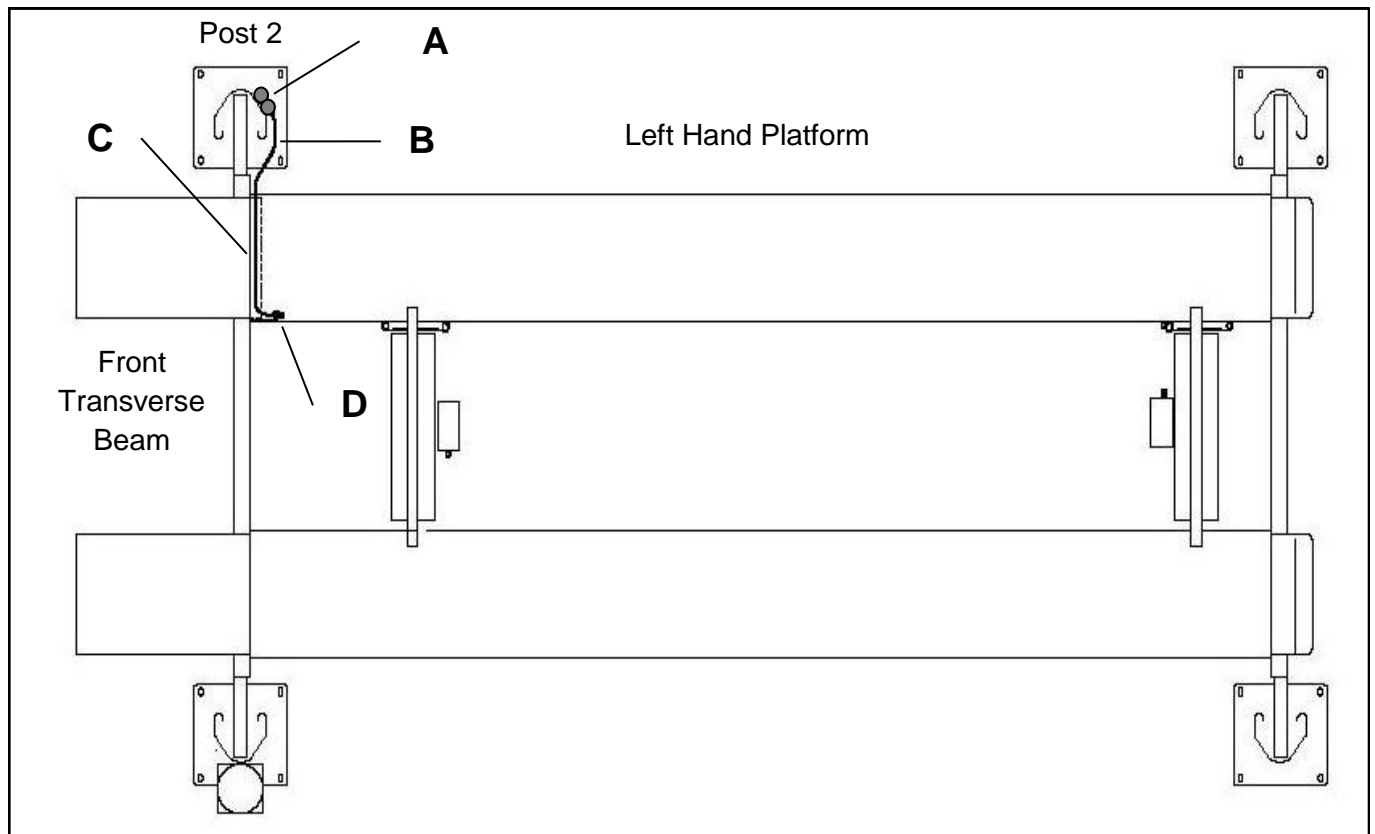


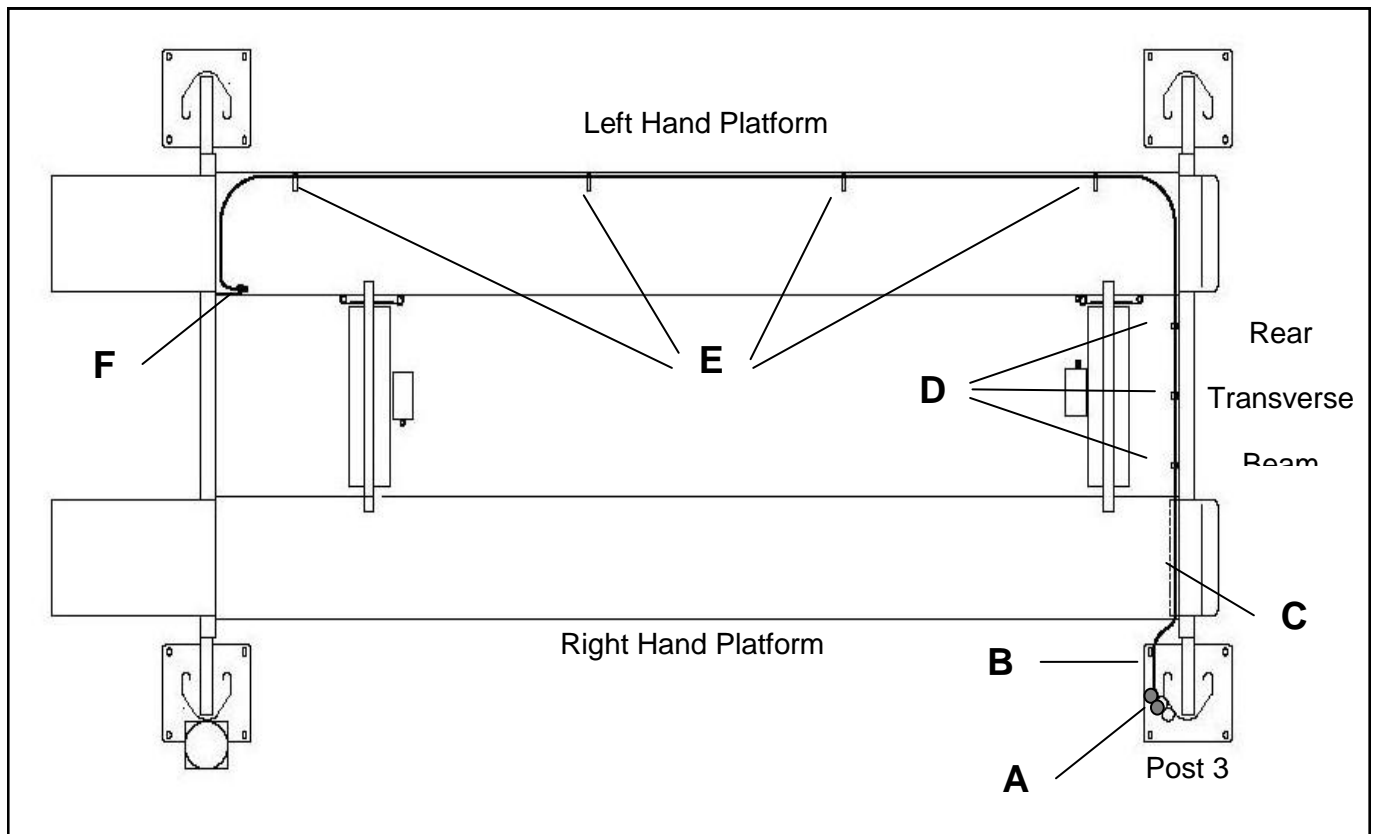
Photo of straight hose (#3) installed at Control Post 1 secured around the hydraulic line.

POST 2 INSTALLATION



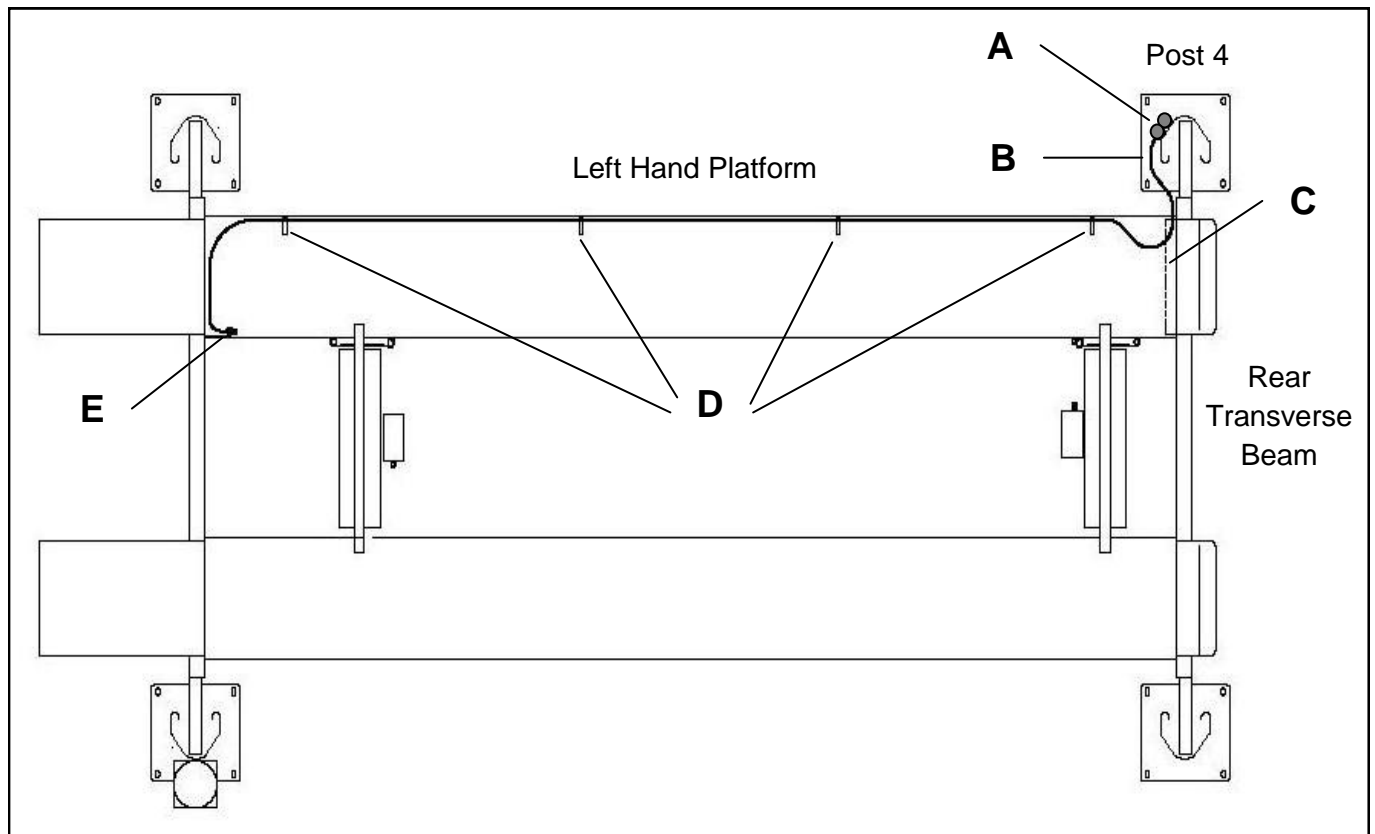
- A. Fit FRL (#1,2,6,21&22) to Post 2 (see mounting FRL instructions)
- B. Run straight hose (#3) from FRL (#1&2) to bulkhead (#8&9), hose runs between front transverse beam and the front end of the left hand platform.
- C. Drill and mount Guard Plate (#4,5,21&22) under the front of the left hand side platform (see Guard mounting instructions)
- D. Connect and trim hose between FRL and bulkhead

POST 3 INSTALLATION



- A. Fit FRL (#1,2,6,21&22) to Post 3 (see mounting FRL instructions)
- B. Run straight hose (#3) from FRL (#1&2) to bulkhead (#8&9), the hose fits between the rear transverse beam and the rear end of the left hand platform and exits to the bulkhead between front transverse beam and the front end of the left hand platform.
- C. Mount Guard Plate (#4&5) under the rear of the right hand side platform (see Guard mounting instructions)
- D. Drill and mount tube clamps (3 x #6&25) to inside face of rear transverse beam (see Transverse Drilling instructions)
- E. Use girder clips (4 x #23) to secure hose inside along the lip of the left hand platform evenly spaced.
- F. Connect and trim hose between FRL and bulkhead

POST 4 INSTALLATION

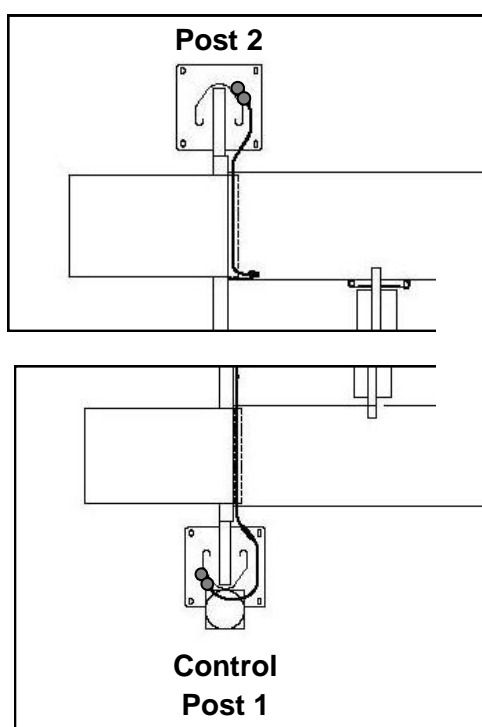
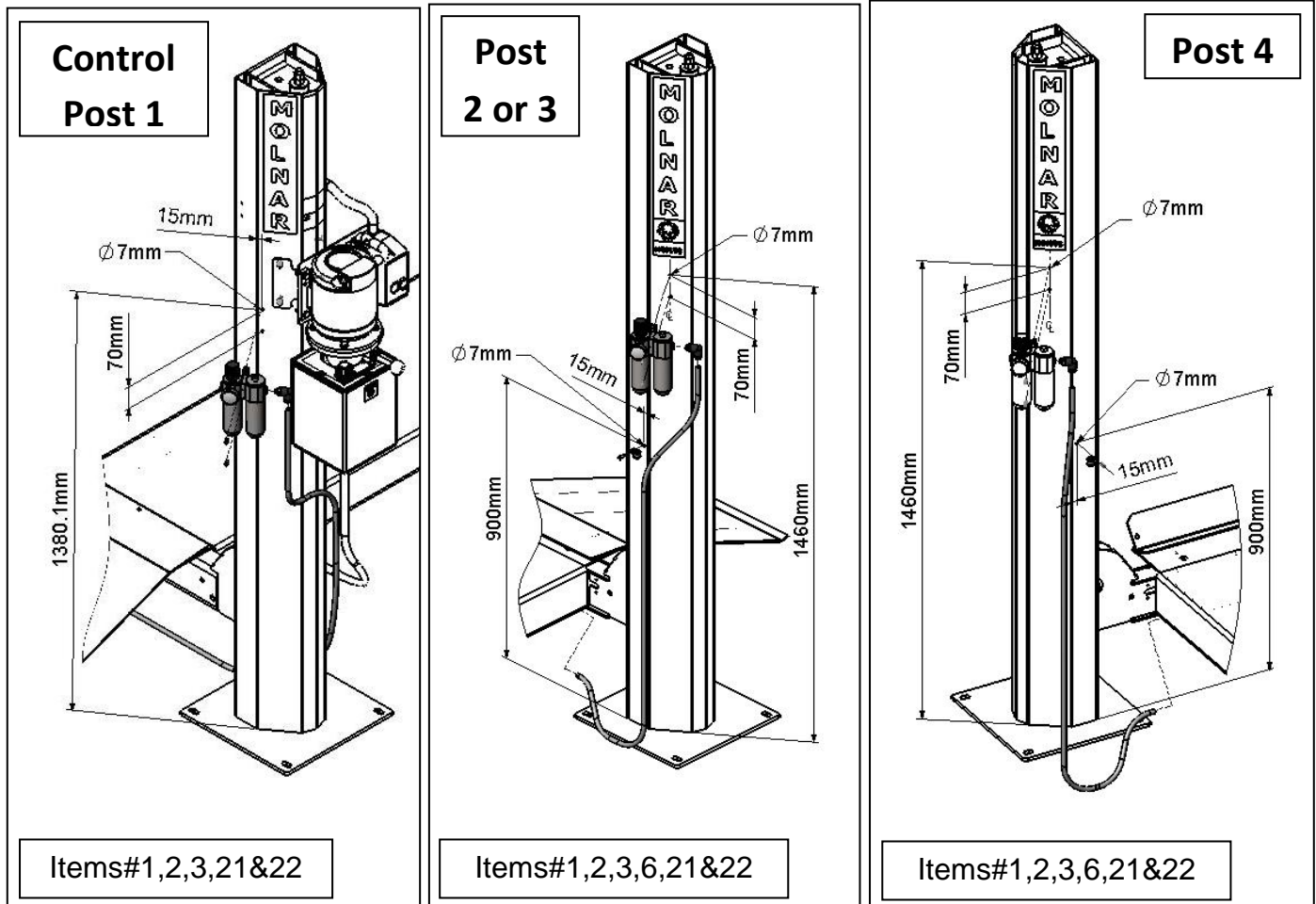


- A. Fit FRL (#1,2,6,21&22) to Post 4 (see mounting FRL instructions)
- B. Run straight hose (#3) from FRL (#1&2) to bulkhead (#8&9), the hose exits to the bulkhead between front transverse beam and the front end of the left hand platform.
- C. Drill and mount Guard Plate (#4,5,21&22) under the rear of the left hand side platform (see Guard mounting instructions)
- D. Use girder clips (4 x #23) to secure hose inside along the lip of the left hand platform evenly spaced.
- E. Connect and trim hose between FRL and bulkhead

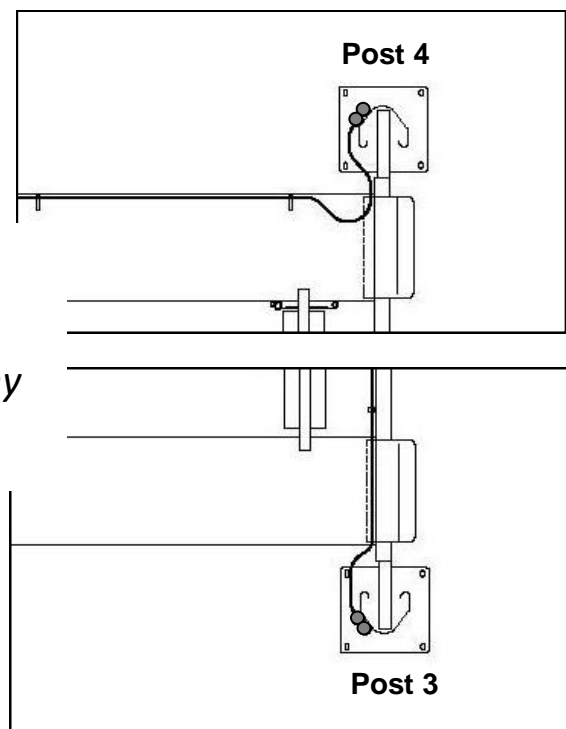
MOUNTING THE FILTER REGULATOR LUBRICATOR (FRL)

Using the FRL as a template to mark the position at the desired and drill out 2 x 7mm diameter bolt holes. The drilling dimensions are shown on the diagram relating to each specific installation.

Fit pushfit elbow (#2) to FRL (#1) and bolt to post (#21&22). For posts 2, 3 & 4 drill and bolt (#21&22) the hose to the post using a Tube Clamp (#6) at the position shown 900mm up from the post base. See diagrams below.

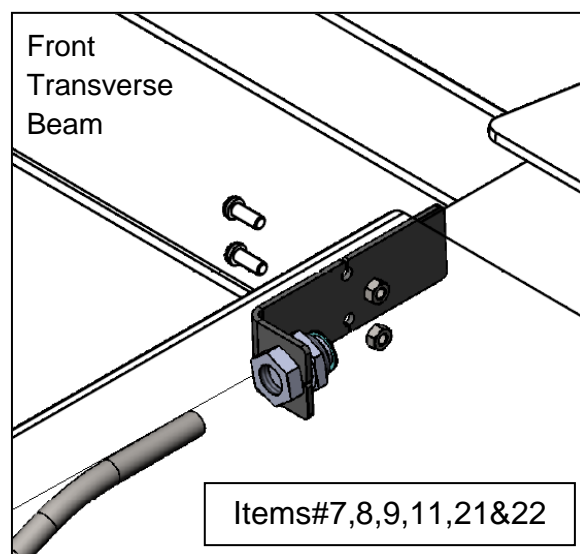
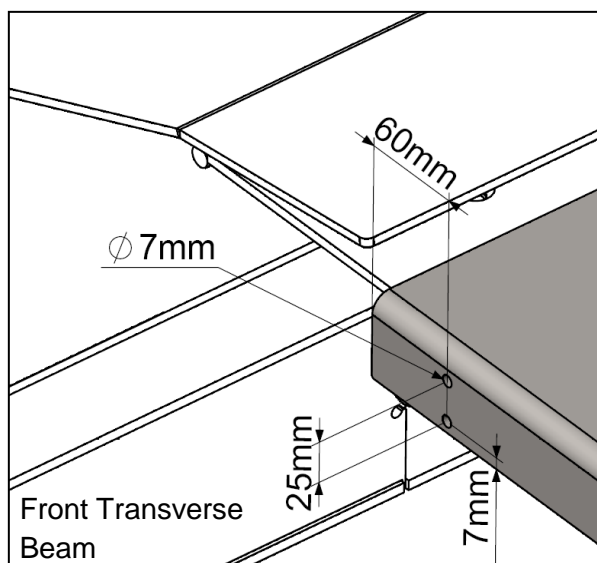


*FRL Mounting
Positioning for
Installation at any
1 of 4 posts.*



MOUNTING BULKHEAD BRACKET

The bulkhead position is the same for all installations. Using the bulkhead bracket (#7) as a template, drill bolt holes at the front inside lip of the left hand platform. Attach the bulkhead components (#8&9) to the bracket and bolt the bracket in under the lip using the nuts and bolts (#21&22) provided. The pushfit end of the bulkhead fitting (#8) should face the front transverse beam and the PUR compression fitting (#9) should face into the centre of the hoist.



Drilling Left Hand Platform for Bulkhead Bracket (#7) and then attaching Bulkhead components

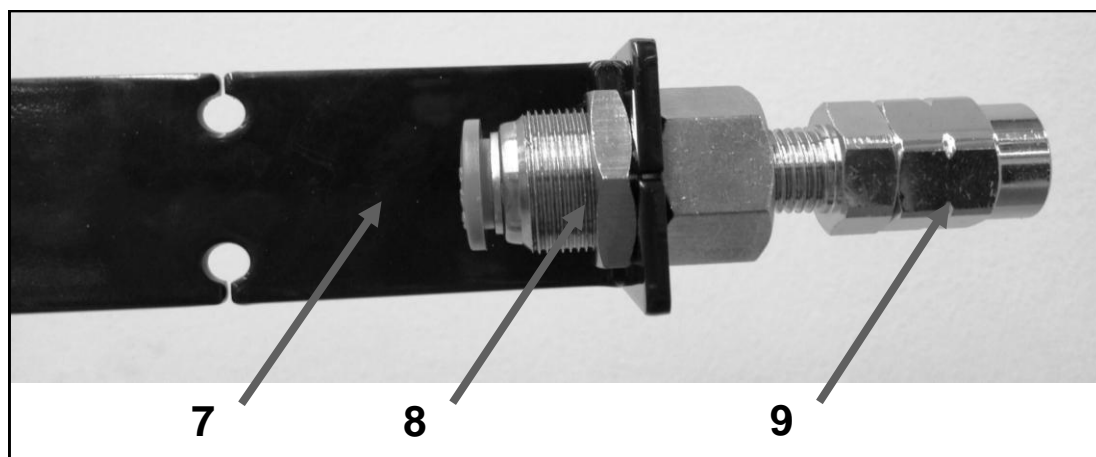


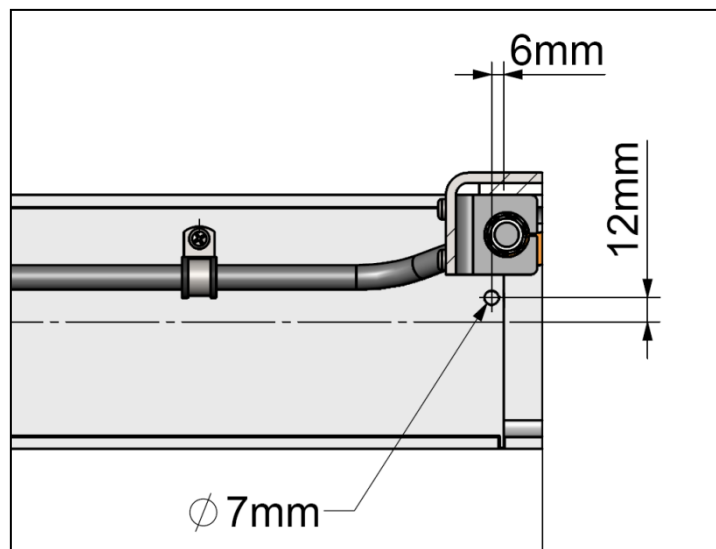
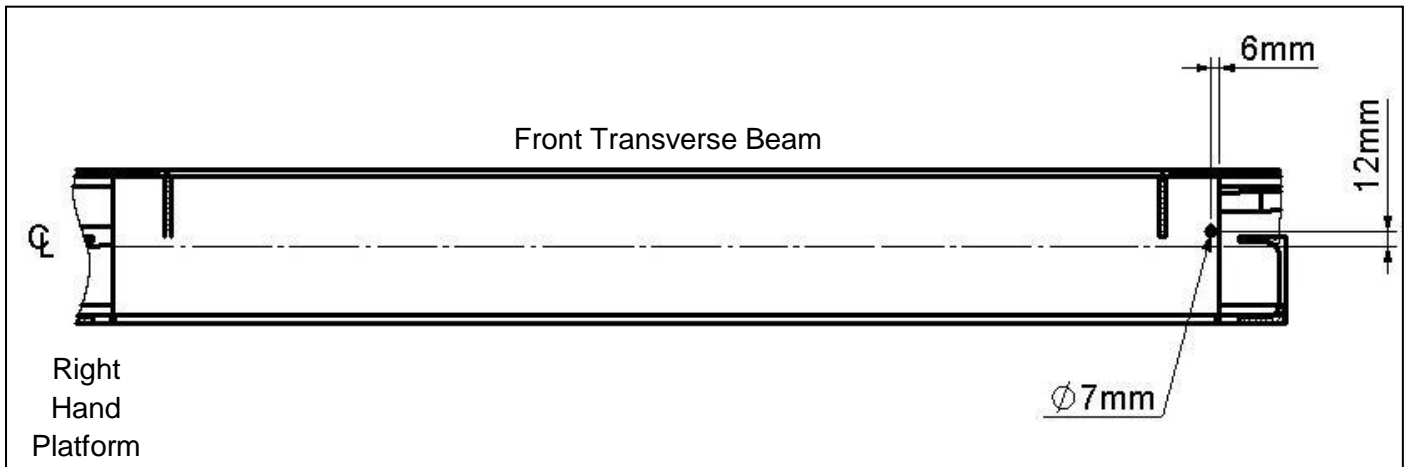
Photo of Bulkhead Components(#7,8&9) Assembled .



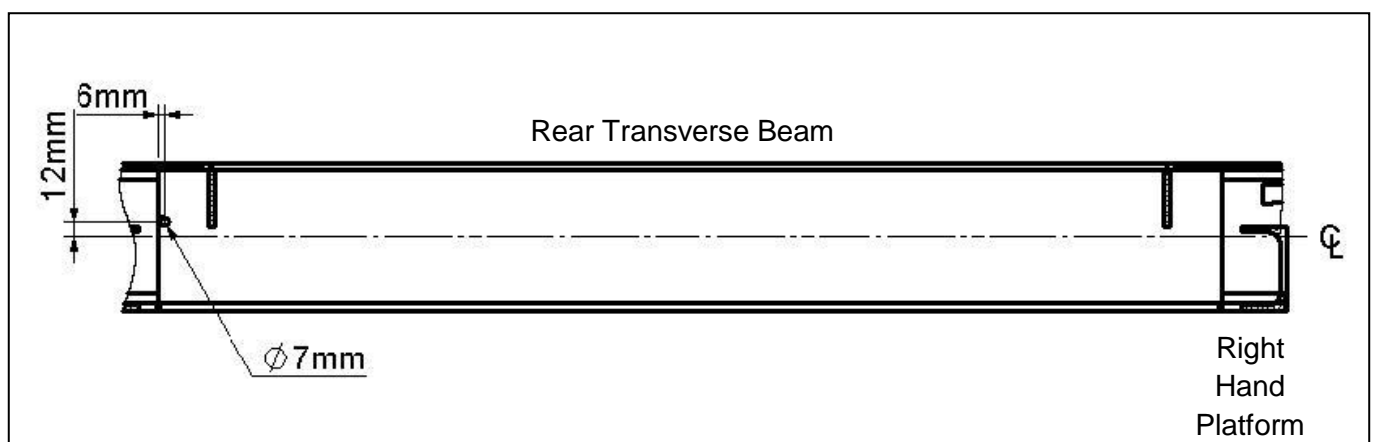
Photo of Bulkhead components attached, under front of Left Hand Platform lip.

DRILLING FOR WIRE ROPE ASSEMBLY

For any format of the installation, a wire rope assembly (#10) is installed along the left hand platform to guide and support the coiled air hose(s) (#11&12). The front and rear transverse beams require the drilling of a 7mm diameter bolt hole, 12mm above centre line, to mount the wire rope assembly securing with nuts provided (#22)



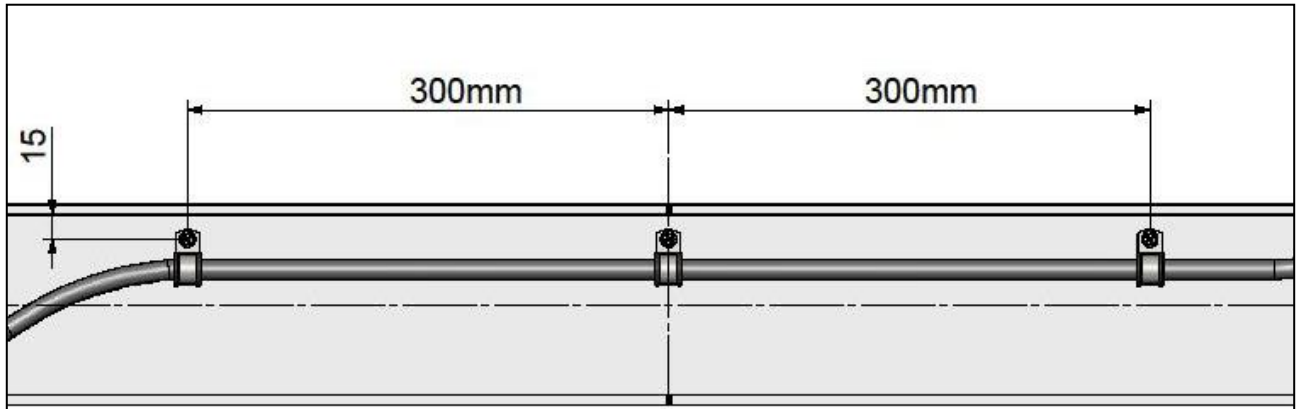
Front Transverse Beam Drilling Dimensions



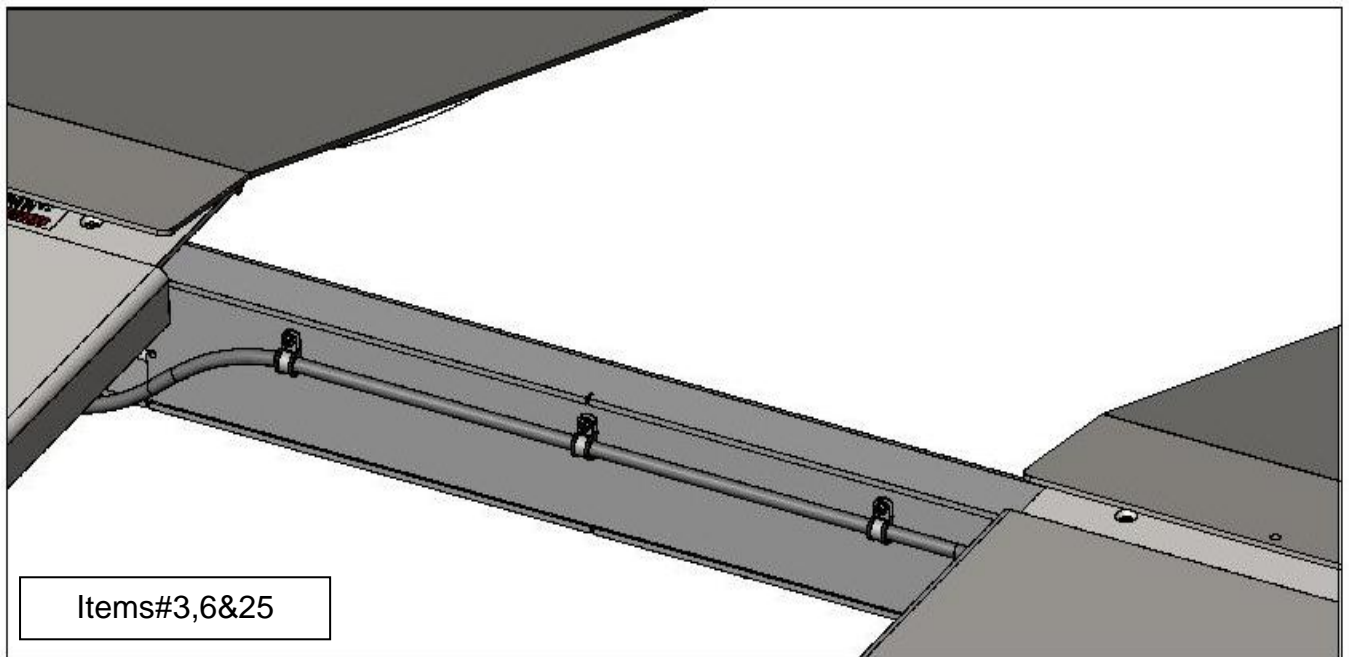
Rear Transverse Beam Drilling Dimensions

MOUNTING TUBE CLAMPS

Installations on Control Post 1 and Post 3 require running the hose (#3) along the inside face of the front and rear transverse beam respectively. The hose is secured by 3 tube clamps (#6) tek screwed in place (#25). Due to the thickness of the transverse beam plate, each tube clamp mounting point should be pilot drilled using a 3mm drill. Tube clamps should only be tightened completely once hose positioning has been finalised.



Tube Clamp Mounting Dimensions (Post 1&3 Installations Only)

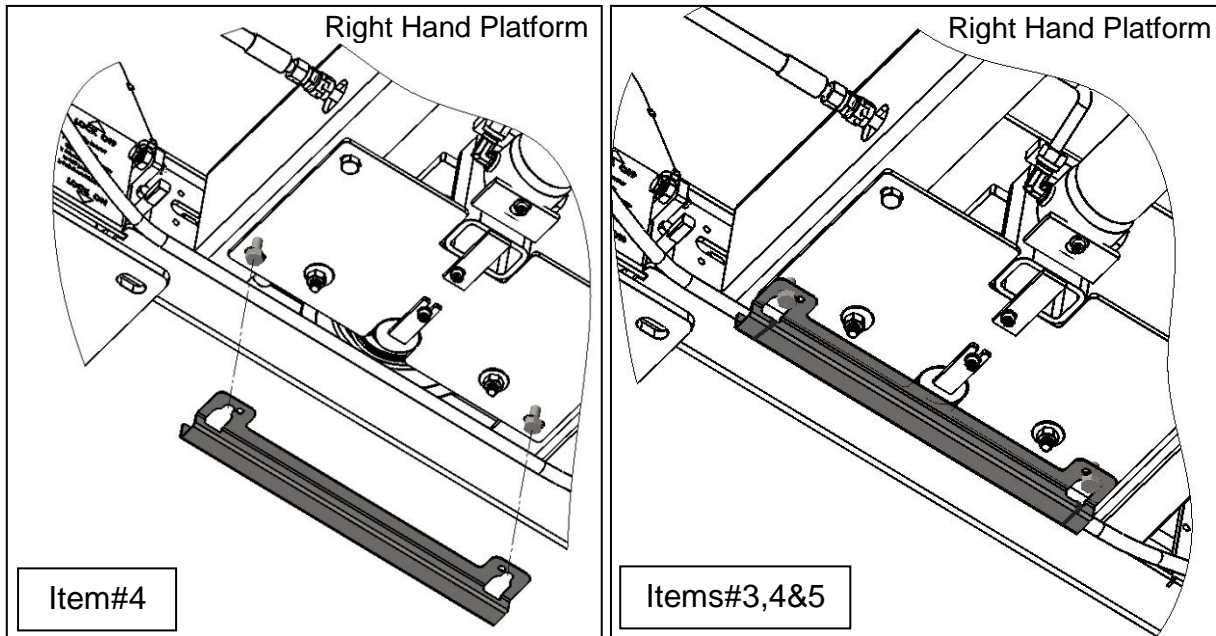


Mounting Straight Hose to Transverse Beams (Post 1&3 Installations Only)

MOUNTING GUARD PLATE

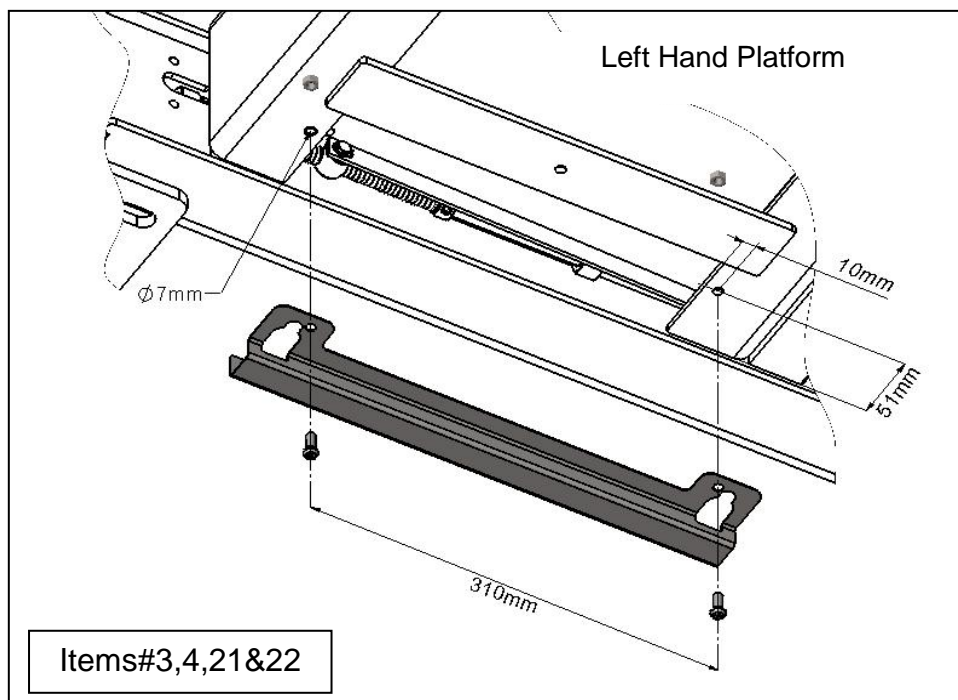
The guard plate (#4) is used to secure and protect the air hose as it comes in under the platform. Using the notch features provided on the guard plate and the 2 cable ties (#5), the air hose (#3) is to be secured in the guard plate to prevent movement. Once the hose is positioned correctly, tighten cable ties and trim off excess.

- a. The guard plate is mounted under the right hand platform for Post 1 & 3 installs, this utilises the keyhole features on the guard plate and the existing bolts under the right hand platform. Loosen the bolts, slide plate over bolts and retighten.



*Mounting Guard Plate under Right Hand Platform
(For Post 1 & 3 installs, utilises existing bolts on hoist)*

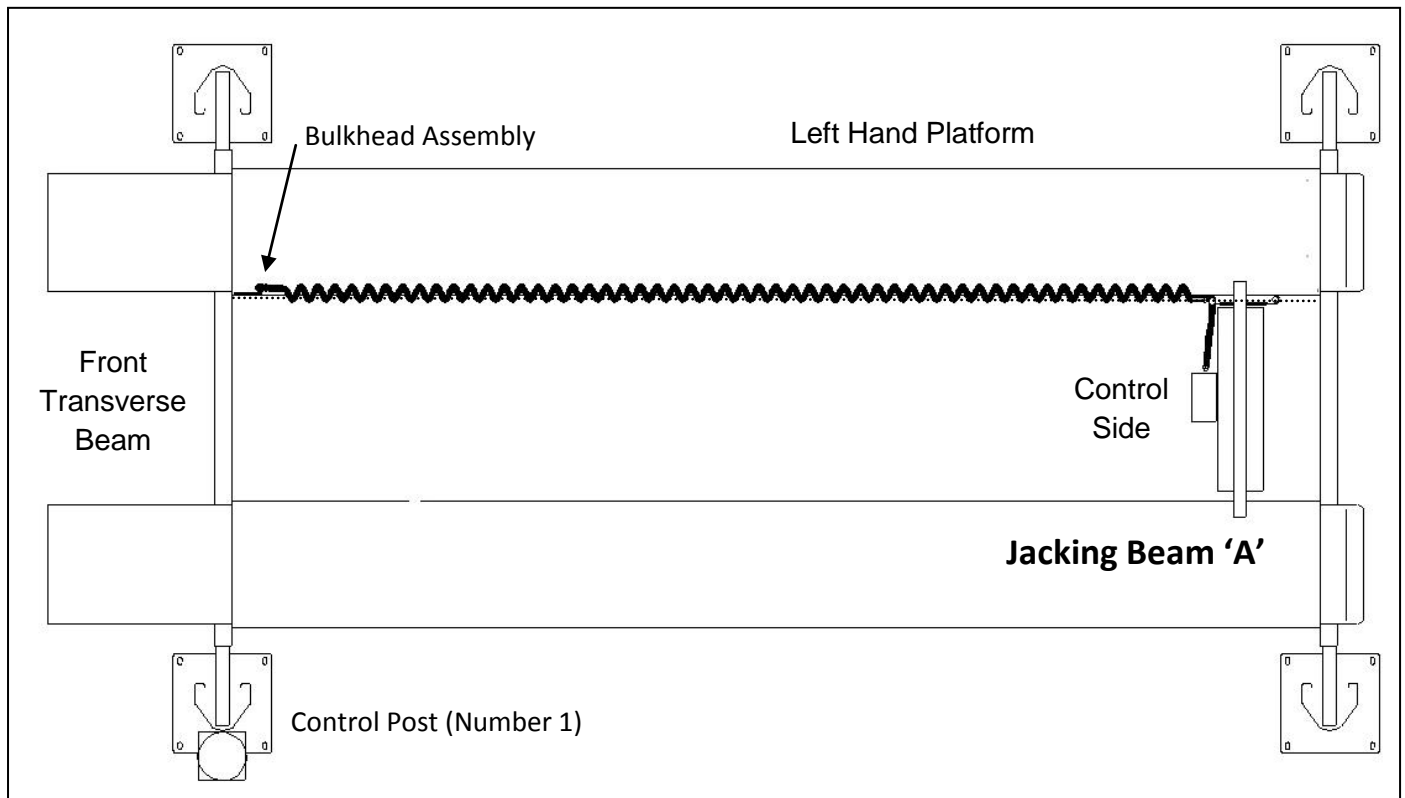
- b. The guard plate is mounted under the left hand platform for Post 2 & 4 installs, this utilises the 7mm diameter holes on the guard plate and requires drilling into the platform and using the nuts and bolts provided (#21&22) to mount.



Drilling and Mounting Guard Plate under Left Hand Platform

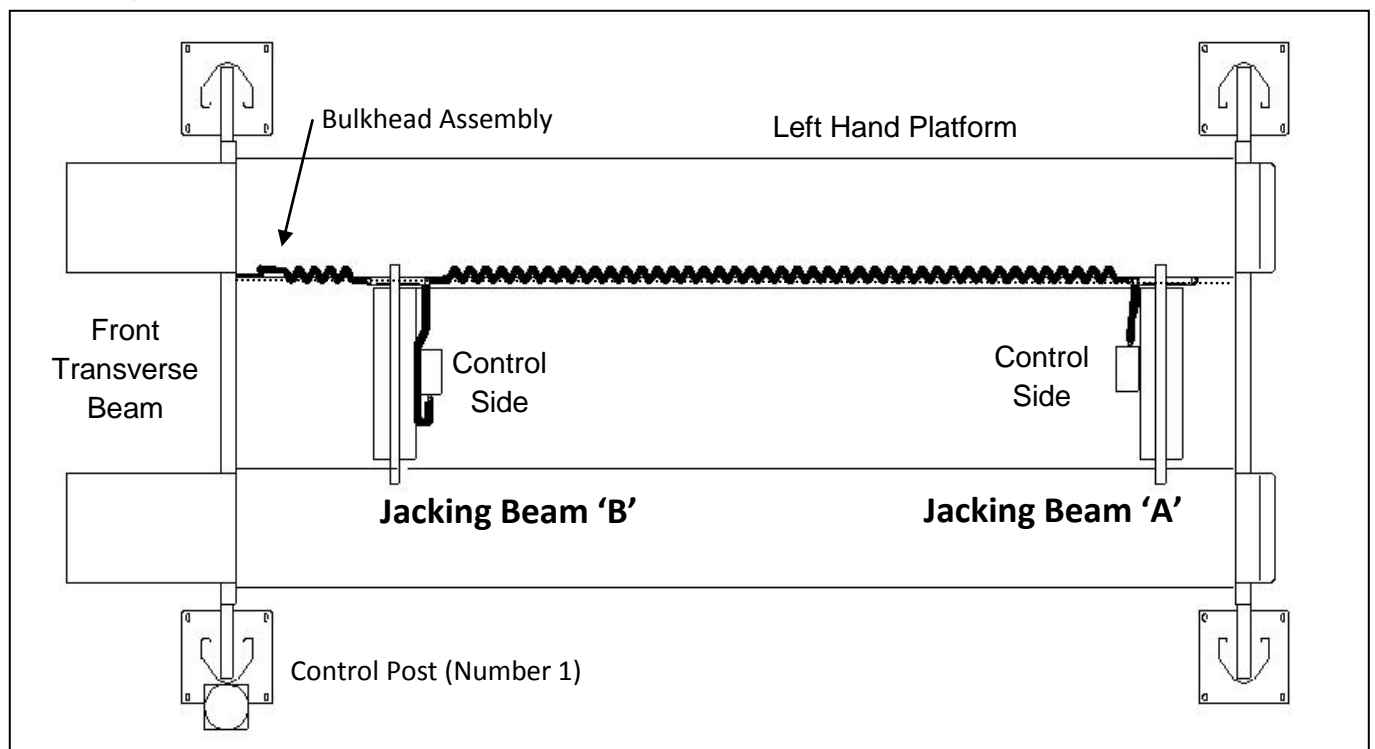
JACKING BEAM CONFIGURATIONS

SINGLE JACKING BEAM INSTALLATION



SINGLE Jacking Beam (A) Installation

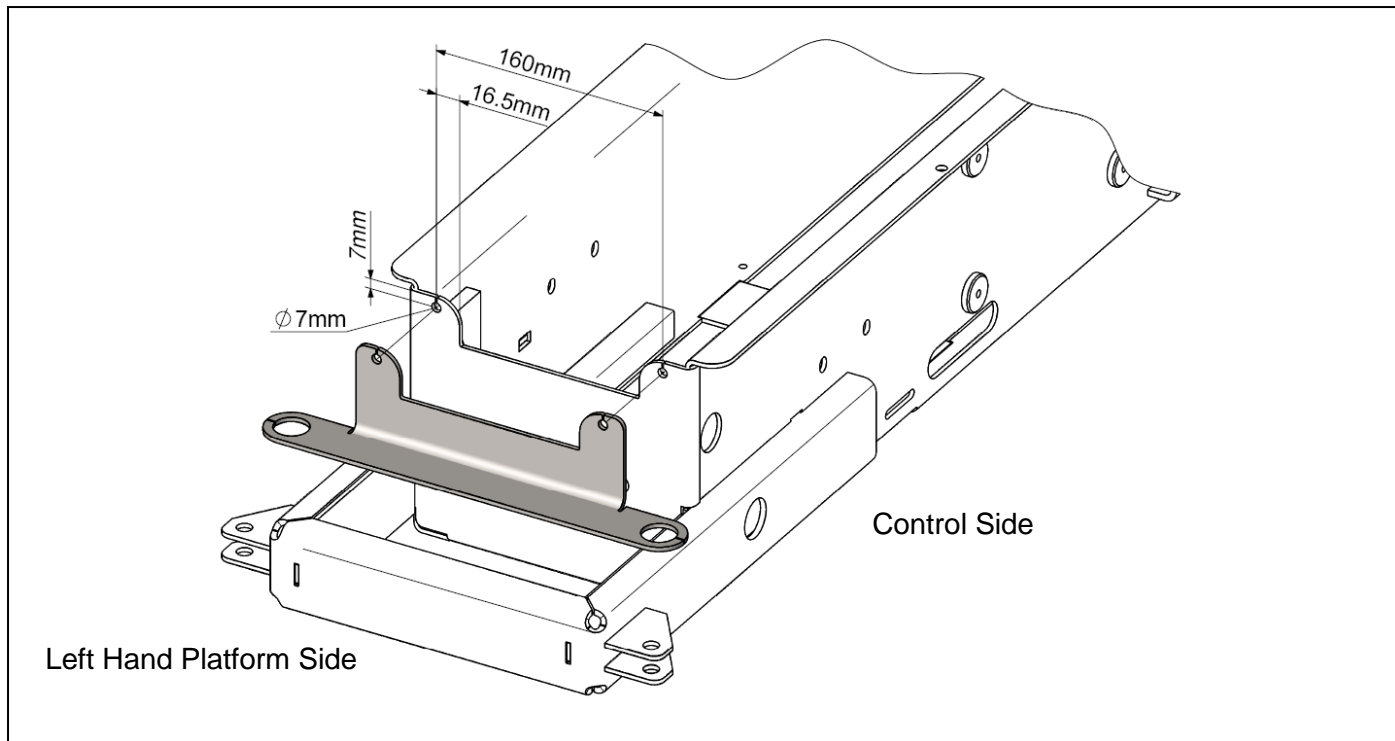
DOUBLE JACKING BEAM INSTALLATION



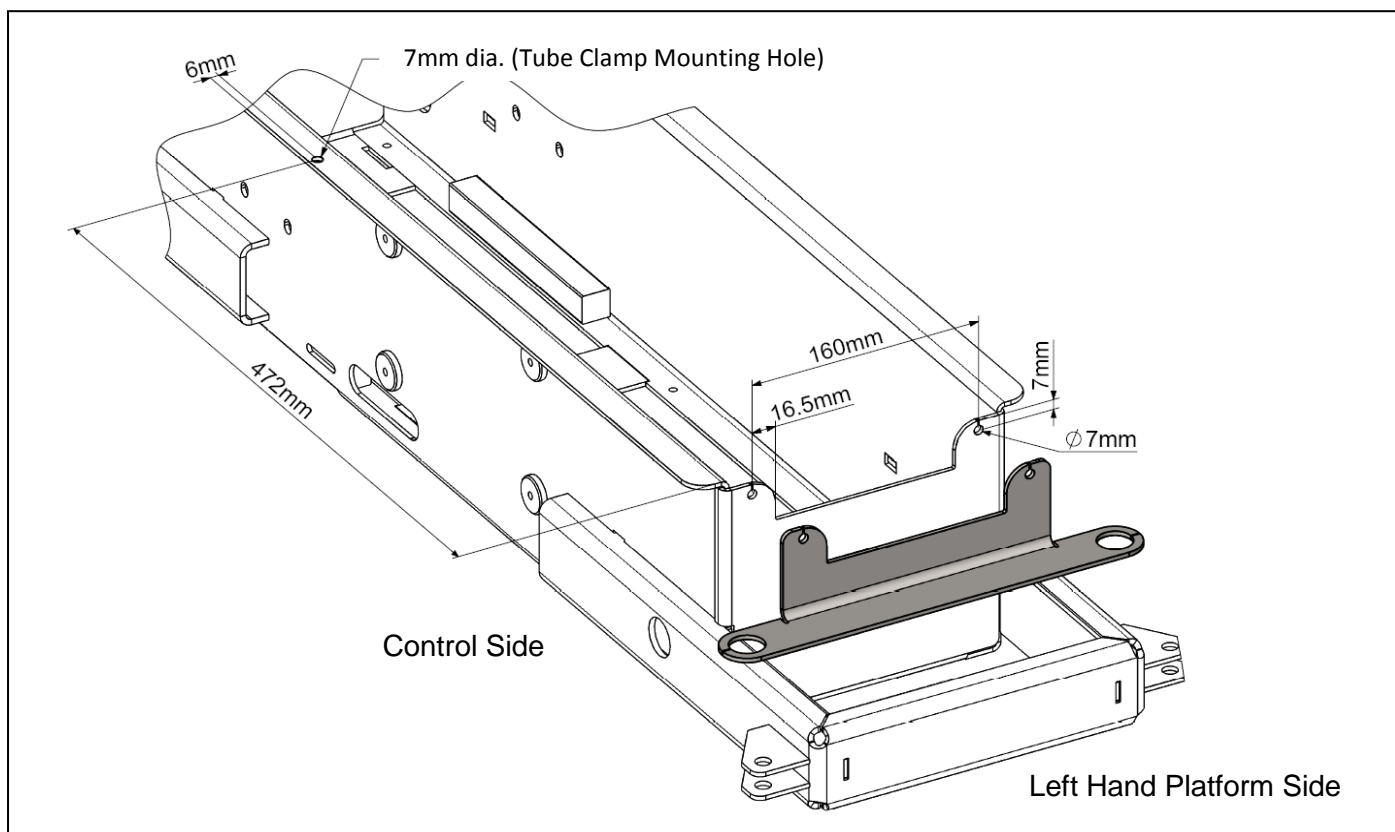
DOUBLE Jacking Beam (A&B) Installation

DRILLING JACKING BEAMS

Using the jacking beam adaptor plate as a template, mark the hole centres and drill out to 7mm diameter 2 holes through the end plate of the jacking beam. The end plate drilled will depend on which direction the jacking beam controls will be facing in operation. The system is designed to have the coiled hose run along the left hand platform and a double system is arrange to have both jacking beam controls facing inwards. Use of the adaptor plate has been designed to negate the need to remove the jacking beams for retrofit.



Jacking Beam "A" Drilling Location and Dimensions



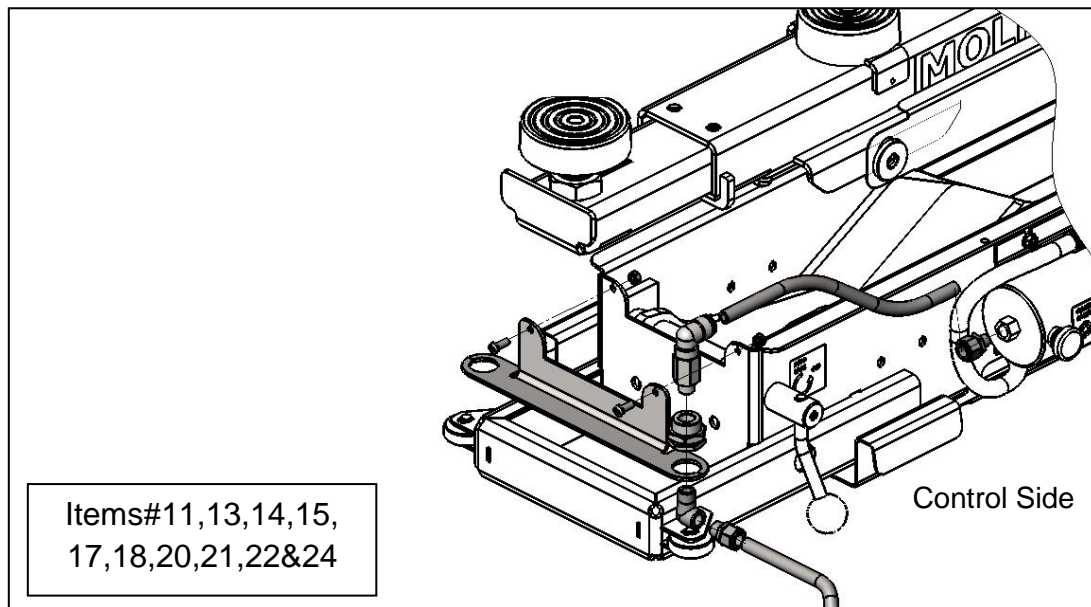
Jacking Beam "B" Drilling Location and Dimensions

ATTACHING JACKING BEAM COMPONENTS:

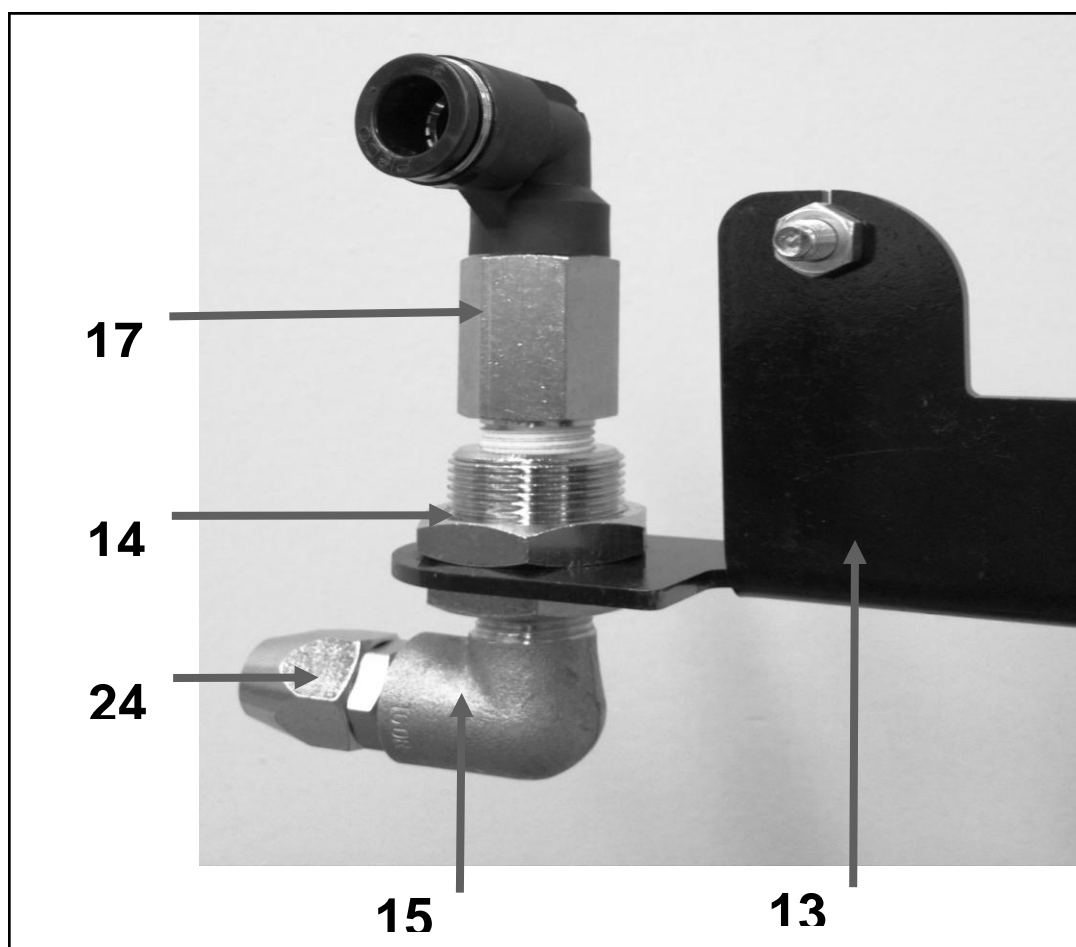
Mounting fittings to jacking beam adaptor plate and then the adaptor plate to the jacking beam as shown. Required lengths of hose are to be cut from the roll supplied to connect between the pushfit fitting on the pump (#20) and the pushfit fitting on the adaptor plate (#17).

ATTACHING JACKING BEAM 'A' COMPONENTS

The Jacking Beam 'A' hose (#18) length 290mm is to be cut from the length of hose (#3)



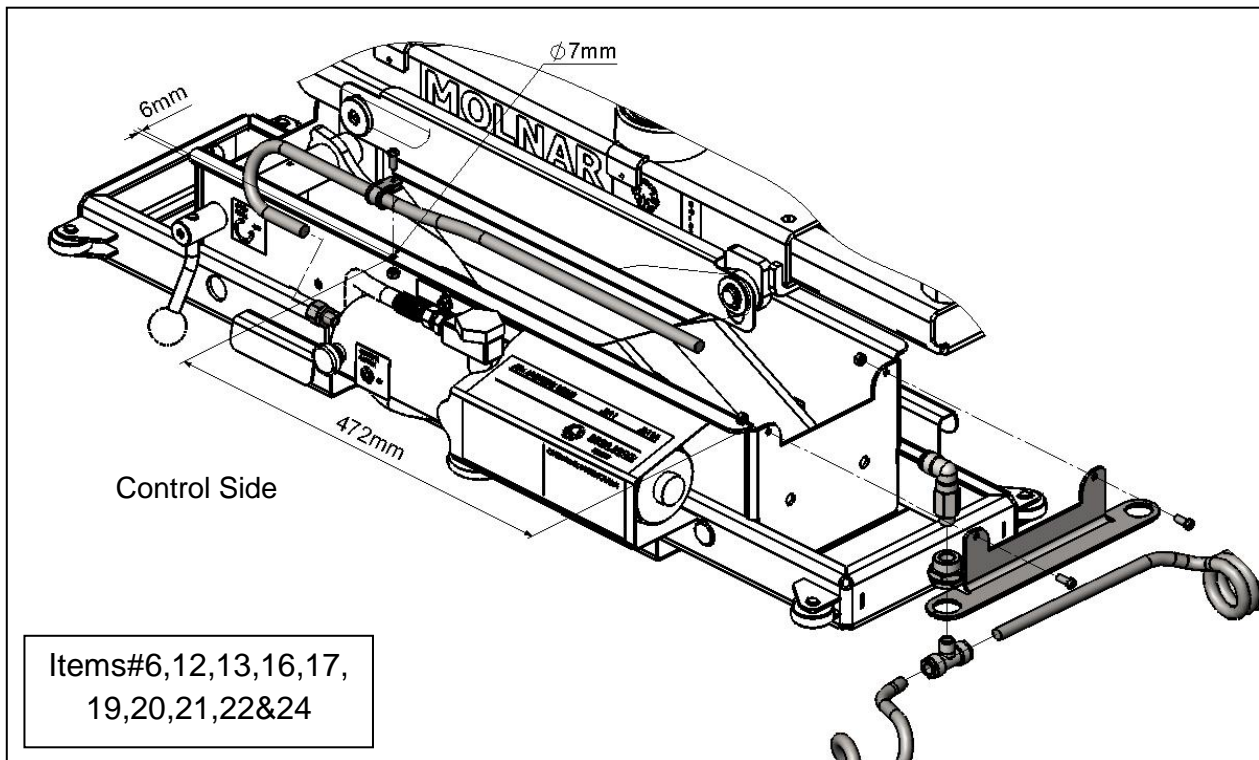
Fitting Jacking Beam "A" Components



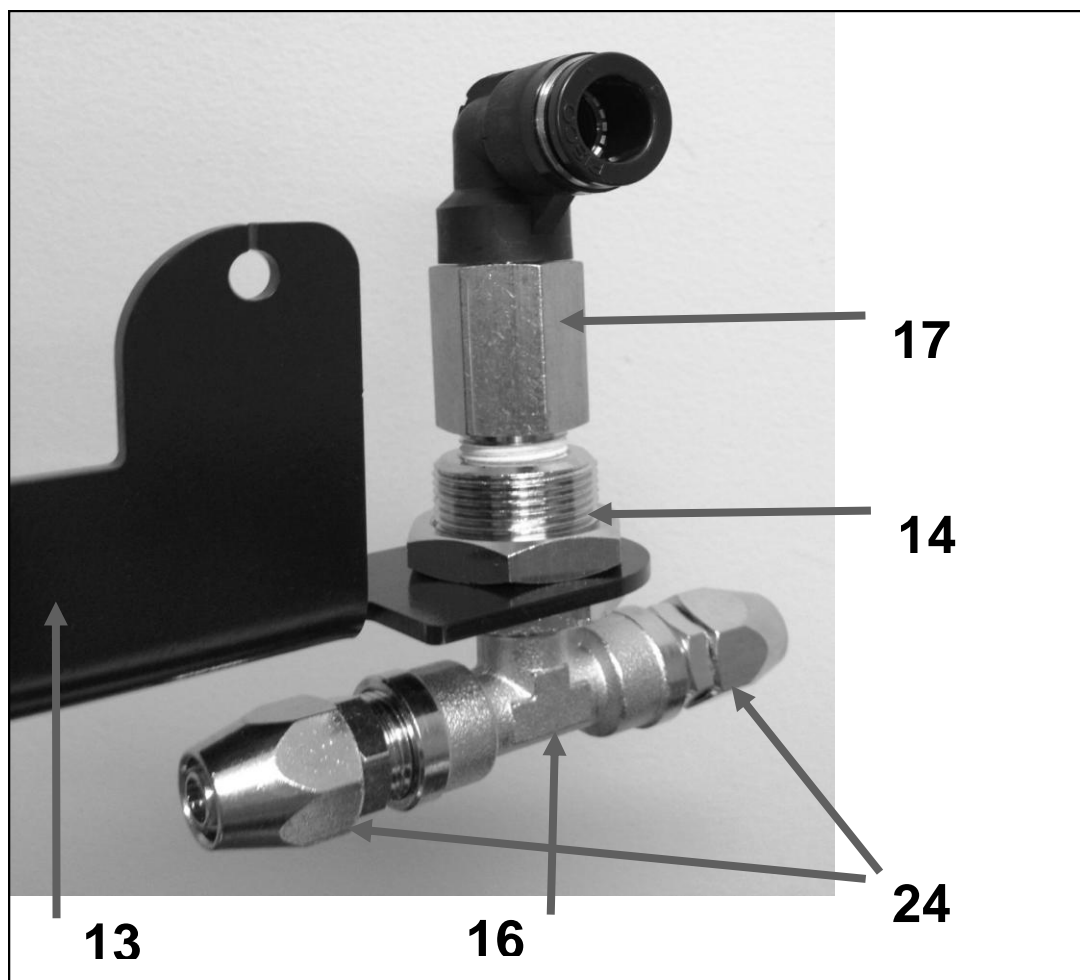
Jacking Beam 'A' Components Assembled (#13,14,15,17&24)

ATTACHING JACKING BEAM 'B' COMPONENTS

The Jacking Beam 'B' hose (#19) length 715mm is to be cut from the length of hose (#3)



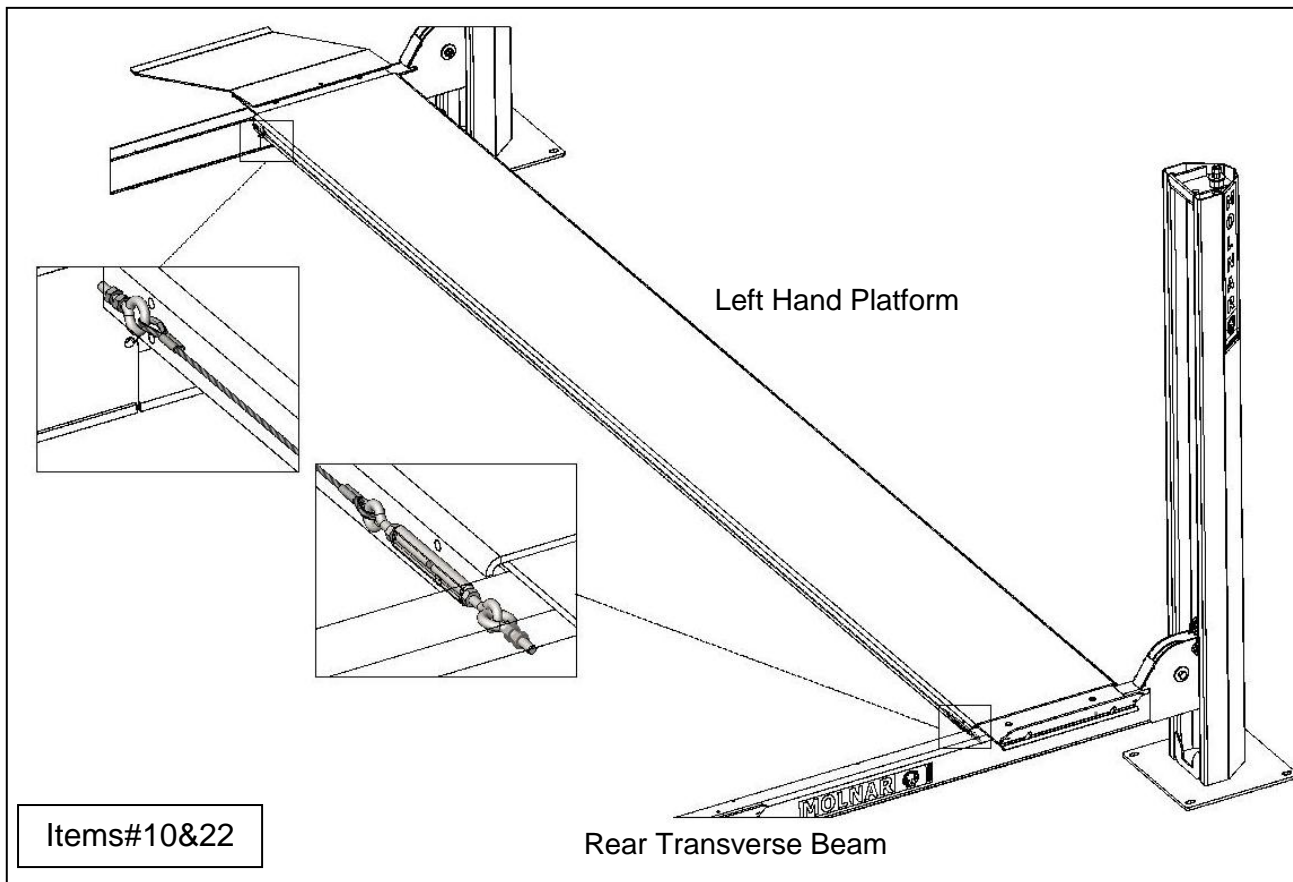
Fitting Jacking Beam "B" Components



Jacking Beam 'B' Components Assembled (#13,14,16,17&24)

FITTING WIRE ROPE ASSEMBLY

The turnbuckle of the wire rope assembly (#10) should be at the rear of the hoist. The eye bolts mounted in the transverse beams through the 7mm diameter holes secured with the nuts (#22) provided. The turnbuckle and eyebolts should be adjusted until the tension in the wire rope is sufficient to keep straight even with the weight of the coiled hose (#11&12) on it.



Wire Rope Installation, Terminations shown in detail.

FITTING COILED HOSES

Once the wire rope, bulkhead and jacking beam fitting are mounted, the coiled hoses can be attached between the PUR compression fittings of the bulkhead and the jacking beam(s). The 6m coiled hose runs between the bulkhead and Jacking Beam "A". For the double jacking beam installation, the 6m coiled hose runs between the bulkhead and Jacking Beam "B", the 4m coiled hose runs between the 2 jacking beams.

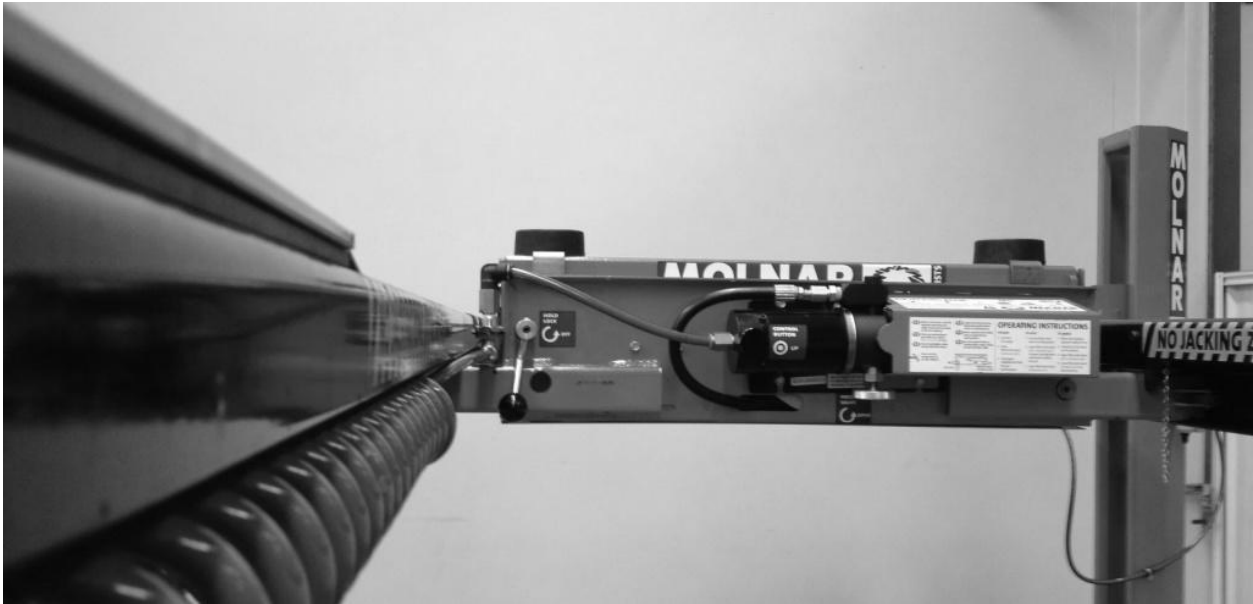


Photos of Coiled Hose (#11) fitted over wire rope assembly between bulkhead and jacking beam.

COMMISSIONING

Before commissioning of Air Reticulation Kit can be said to be completed, system should be tested with Air Jacking Beams operating. Check for system leaks, leaks should be audible. Check tightness of fittings, thread seal and end condition of air hose. Check pressure at FRL when Jacking Beam is operating.

Operators must be shown the safe way to operate the system and how to properly maintain the system.



Completed Air Delivery System

MAINTENANCE

- Check fluid levels in FRL at least weekly.
 - Drain water when filter is full
 - Keep lubricator topped up to maximum indicated level with air tool oil.
- Report any audible leaks immediately, check suspect fittings.

INSTALLATION RECORD

Distributor (vendor) Company Name _____

Installer Name _____

Installer Contact Details _____

Installer Signature _____

Date _____

Owners Authorised Representative _____

Owners Signature _____

Date _____

These records should be retained for administrative and warranty assistance



For more information, please contact us or your local Molnar Representative

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onwards & upwards