# R0000571 Fit and Level Cut Tables , Finalise Eject

Alignment and fitment details for cut tables and eject drive

Difficulty **Hard** Duration **6 hour(s)**

## Contents



# Introduction

**Tools Required**

1 meter straight edge
500mm rule
Standard hex key
Standard spanner set
Feeler gauges
Engineers level
Adjustment shim

**Parts Required**
A0001069 Energy Chain Series B15.050 (48mm radius) Openable x 0.5

A0001070 Igus Mounting Br Set for A0001069 Non-Pivot x 1
A0001074 igus mounting bracket set x 1
D0004551 Cylinder Spacer x 1
D0004553 Cover Fixing Bar x 1
D0004554 Bar Spacer Short x 1
D0004555 Bar Spacer Long x 1
D0004769 Ejector Clamp Pad to be made in conjuction with D5121 (5305) x 1
D0004770 Infeed Clamp Pad to be made in conjunction with D5122 (5299) x 1
D0005121 Ejector Clamp Stainless Pads (5306) x 1
D0005122 Infeed Clamp Pad (5300)x 1
D0005199 Ejector Cover x 1
D0005412 Energy Chain Adapter Plate x 1
H0004556 Fixing Bar Gap Cover (5297) x 1
H0004656 Material Trip Stripx 1
P0000368 Extension 1/8 bsp x 22 long x 1
P0000443 Cleanline Cylinder 32 x 450 PN11246 x 1
P0000444 Reed Switch: Pneumax 1580U (5.0m Lead) x 2
P0001198 flow controller 6mm elbow 1/8 x 2

# Step 1 - Unless otherwise stated

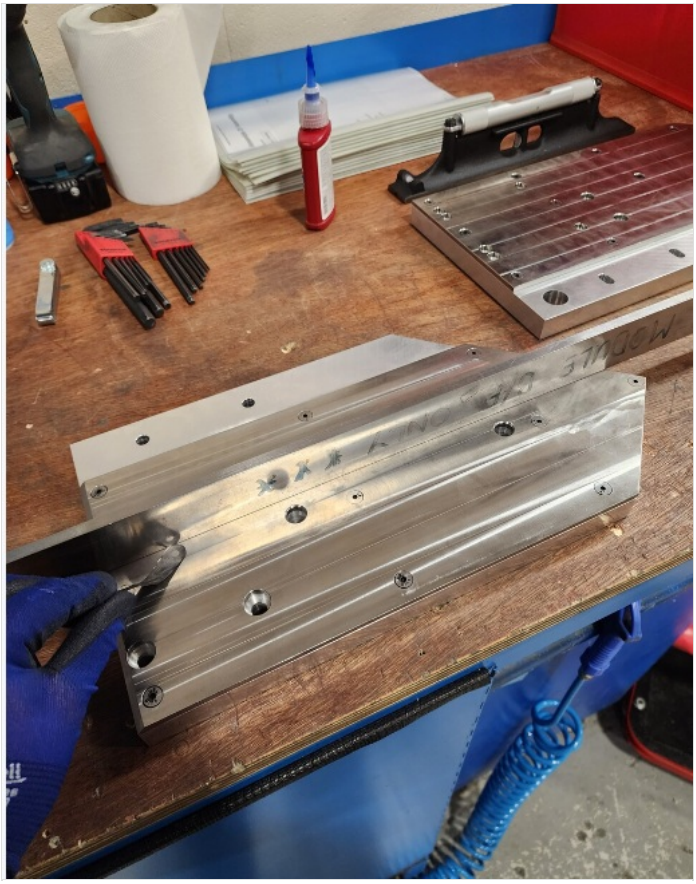
All bolts to have Loctite 243 adhesive applied unless otherwise stated
All Threaded Pneumatic connections to have Loctite 570 applied
All bolts to be pen marked once adhesive applied and correct tension added


# Step 2 - Quality Check

Both cut tables should be inspected for flatness before commencing fitting
Use 1 meter straight edge and 0.002" 0.05mm feeler gauge to inspect

Report any deviation above Feeler gauge size


QUALITY

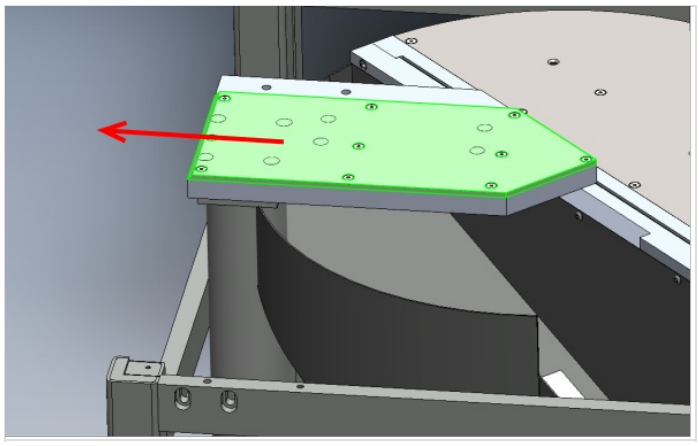



HyFlex
Ansell

# Step 3 - Position

Clearance is vital for correct operation

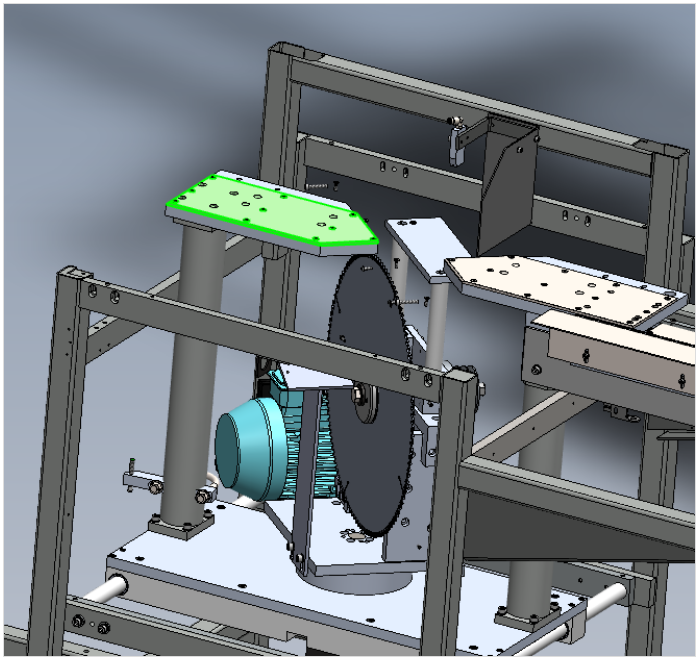
Please ensure that the table indicated is fitted as far as possible in the direction shown. Use clearance in fixing holes to obtain maximum movement possible

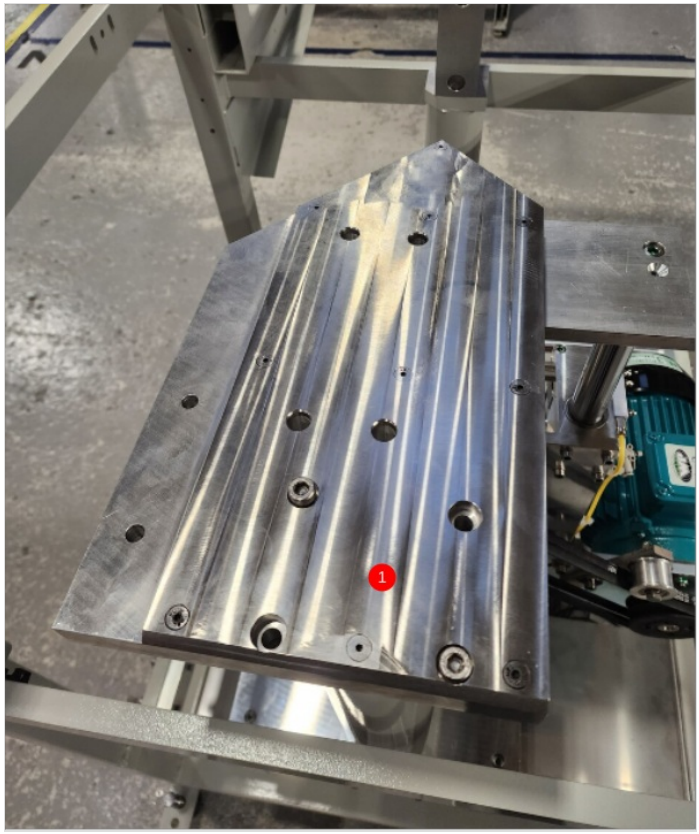


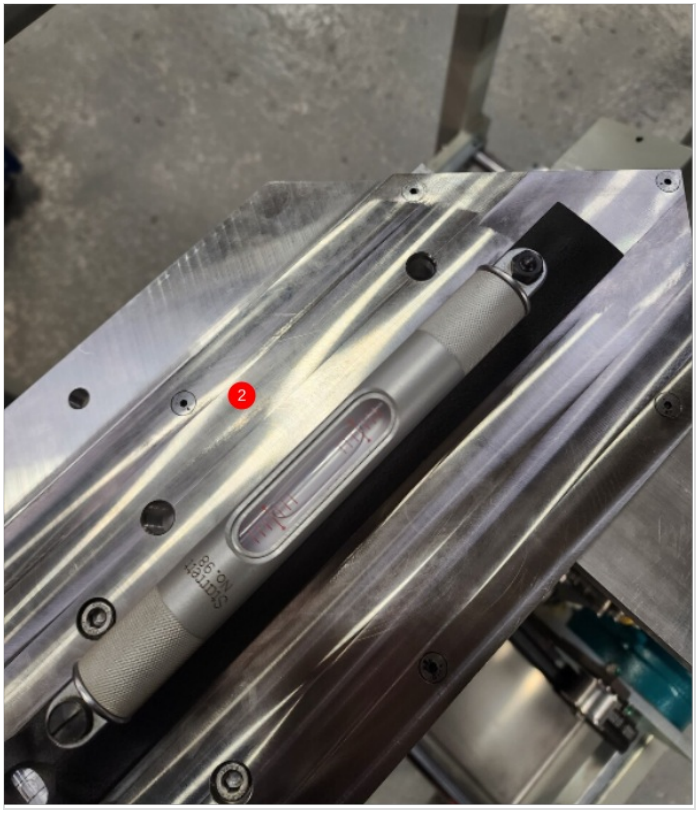
# Step 4 - Level Infeed pad

1 Attach Infeed pad using 4 off M8 x 35 socket caps with no adhesive. Only apply medium tension to fasteners
2 Check level in both directions with engineers level

3 Add shim if required to adjust, Shim should be cut width of post where being fitted, and protruding as shown. Ensure shim is pushed against M8 socket caps holding table in position (shims will be trimmed later )
Ensure 4 off M8 fasteners have final tension applied , to ensure accurate representation with shims fitted






2

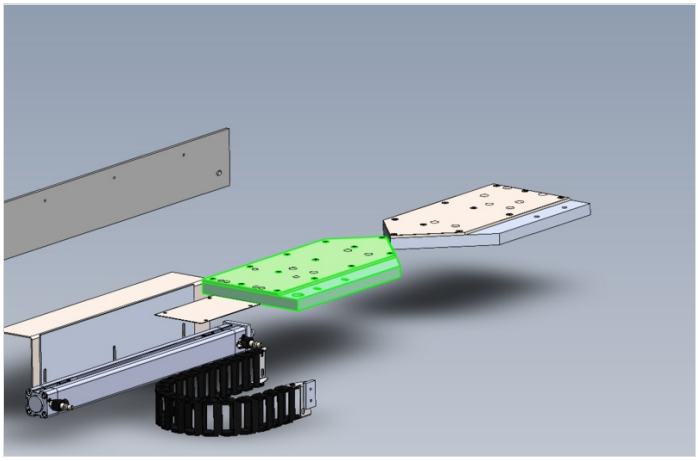

2

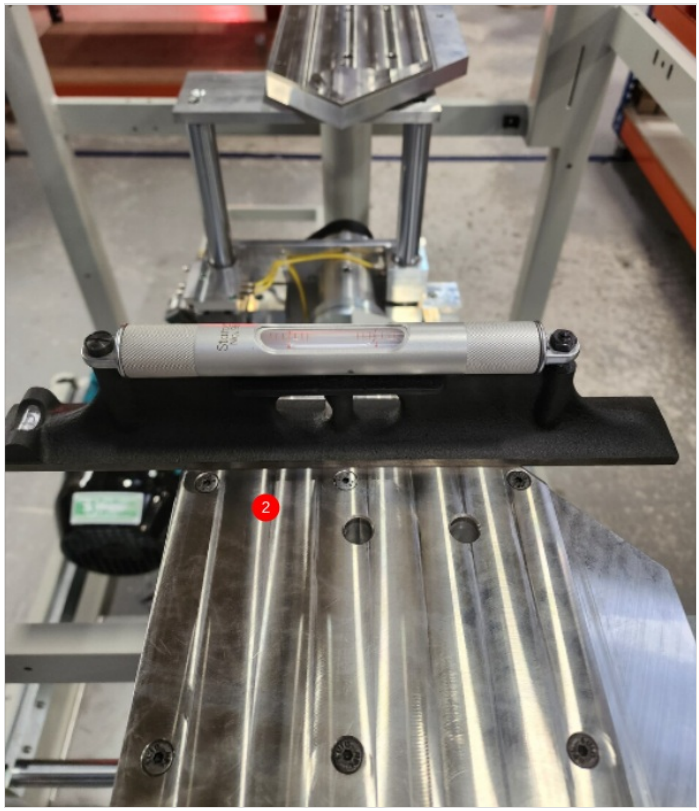

3

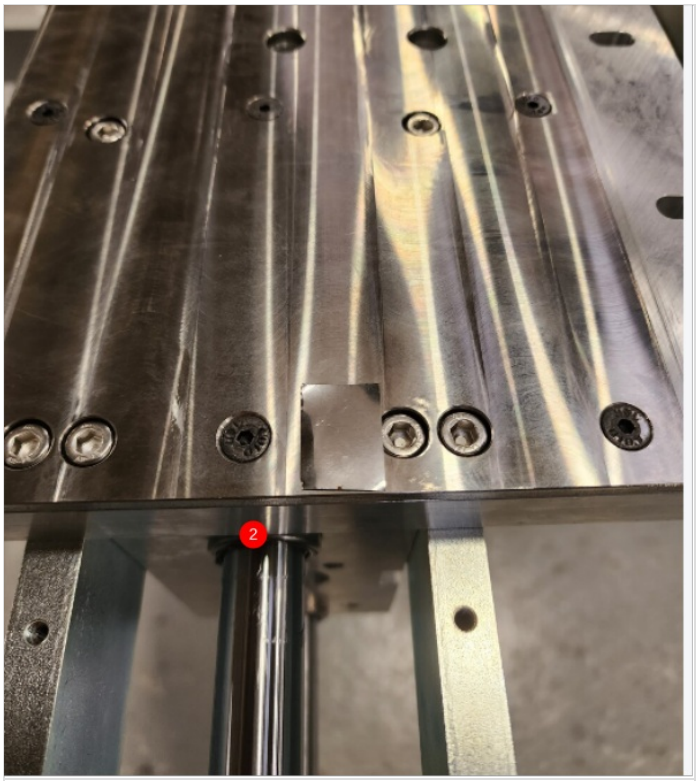
# Step 5 - Attach Outfeed Pad

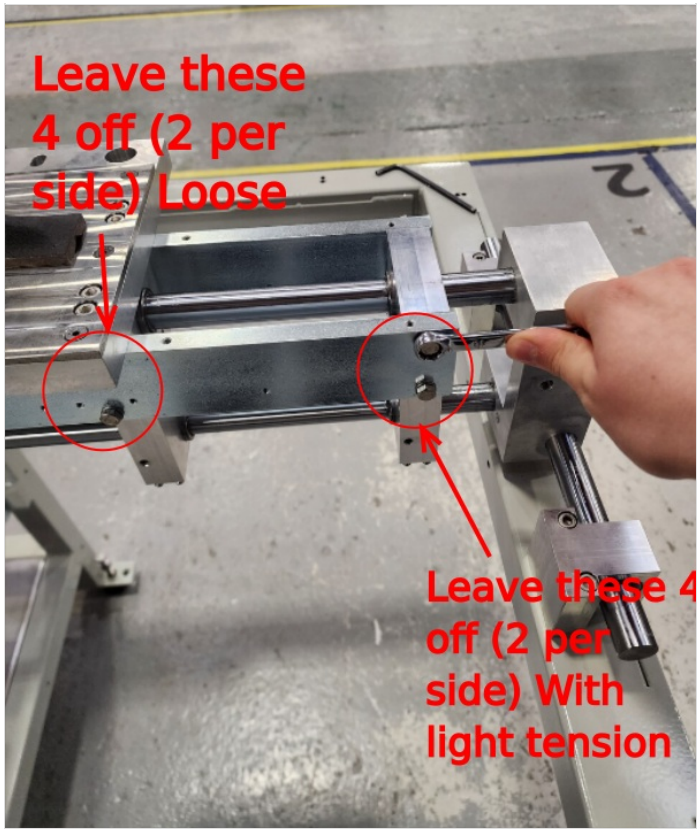
1 Attach Eject pad using 6 off M6 x 30 socket caps, Do not apply adhesive, do not apply final tension
2 Check Y axis level using engineers level. Use shim to adjust if required . Use shim as shown ( shown on top face for position info, shim should be placed between cut table and bearing block according to level adjustment required)
3 Check X axis level . To adjust, side bars require positioning. Adjust as shown to set level.

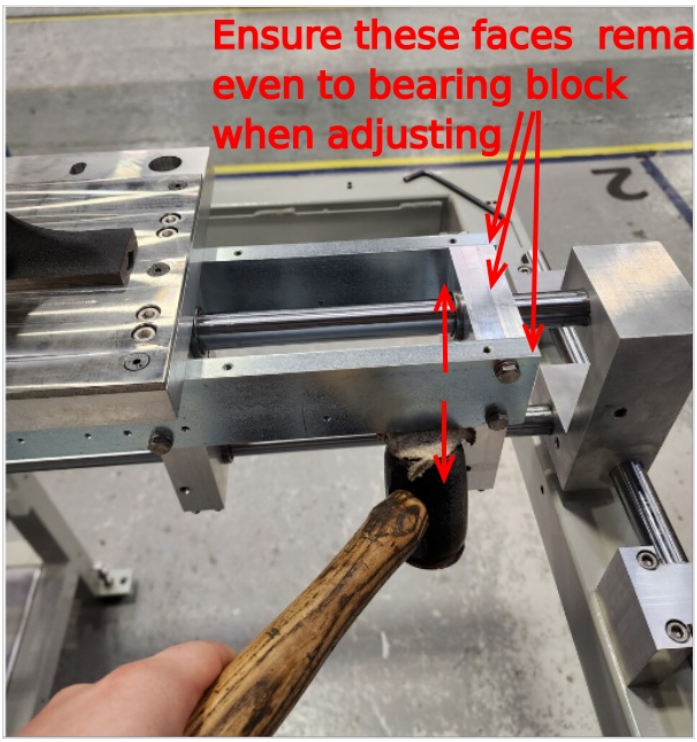
- Apply light pressure to set bolts indicated.
- Leave indicated set bolts loose
- Adjust up or down to adjust X axis table level
- Apply final tension to set bolts and recheck level (do not apply adhesive yet )



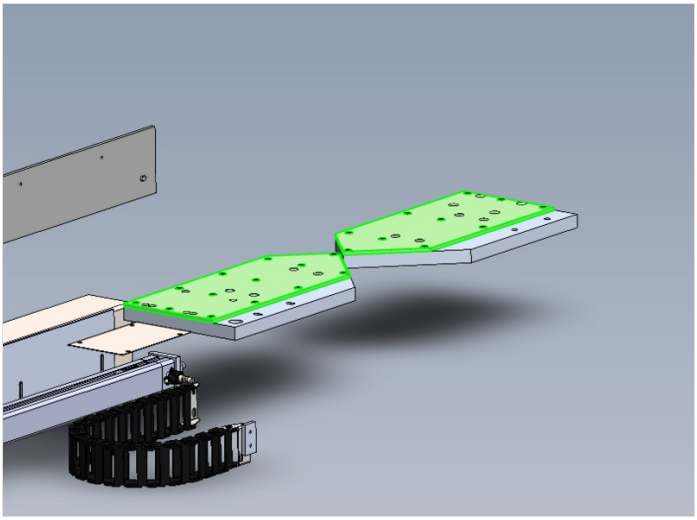









## Step 6 - Set flatness



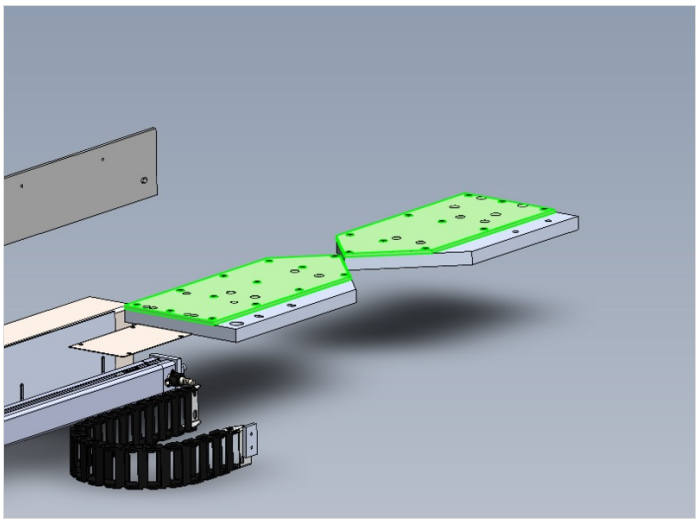
**PICTURES REQUIRED OF THESE STEPS PLEASE**
Height position between tables now needs to be checked and set if required

1 Use 1 meter straight edge across both tables as shown, use feeler gauges to identify height difference between tables

2 Add full face shim to table identified as low, ensuring original shims are kept in place
3 Recheck levels once shim is added
4 Use straight edge and feeler gauges to check flatness . Eject table may be adjusted slightly (-+ 1 level division) to aid alignment
5 Check transition between tables is smooth, using the engineers level to gauge

## Step 7 - Set front alignment

1 Use small clam[p and block as shown to hold 1 meter straight edge against edges of cut tables with light pressure on the
6 off M6 socket caps on eject table
4 off M8 socket caps on the fixed table
Adjust the points in the direction shown to achieve alignment on the straight edge
3 Check alignment is correct using 0.002 feeler gauge to check faces of cut tables to straight edge

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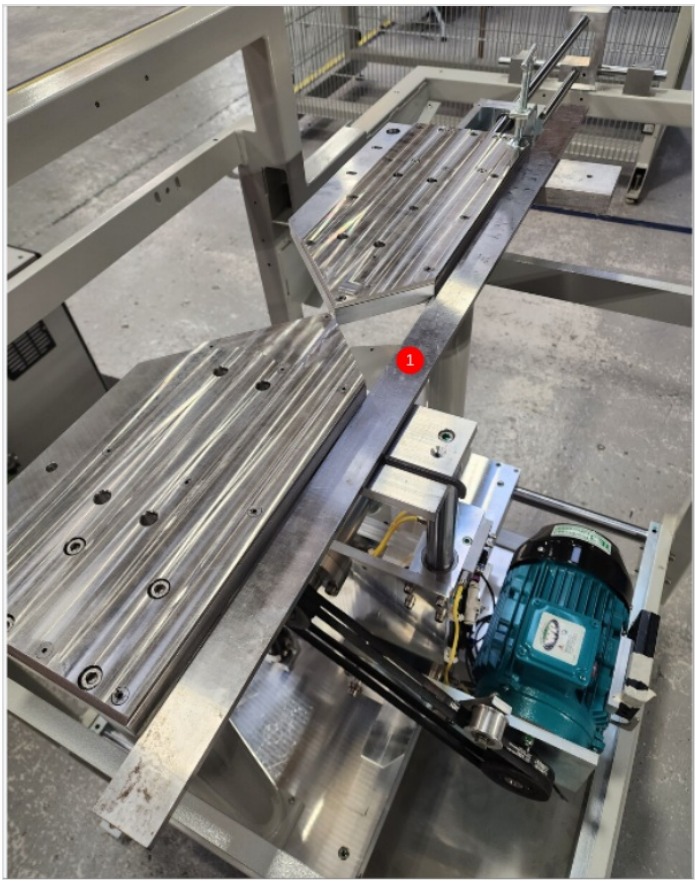
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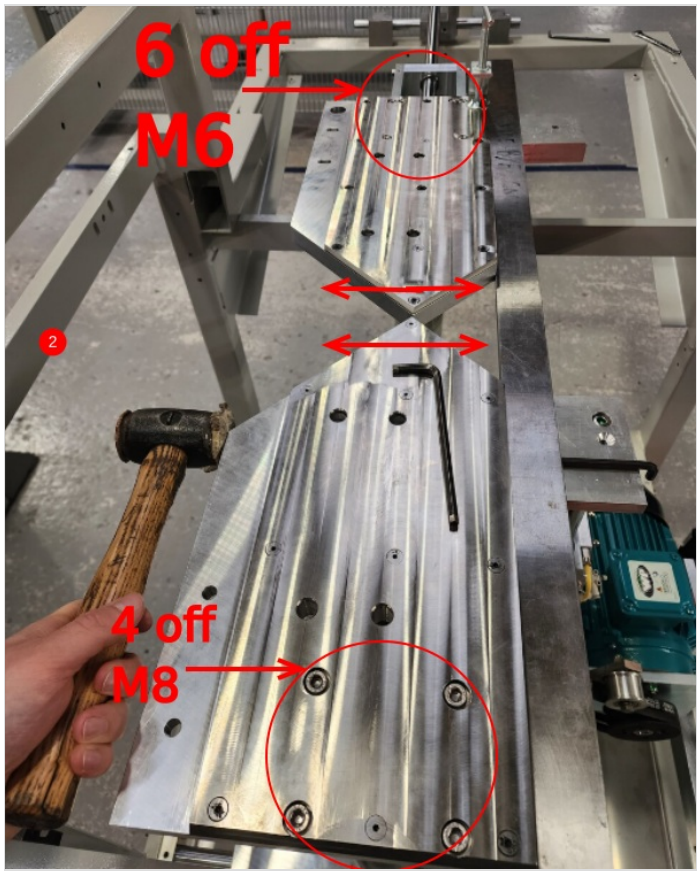

6 off
M6
2
4 off
M8

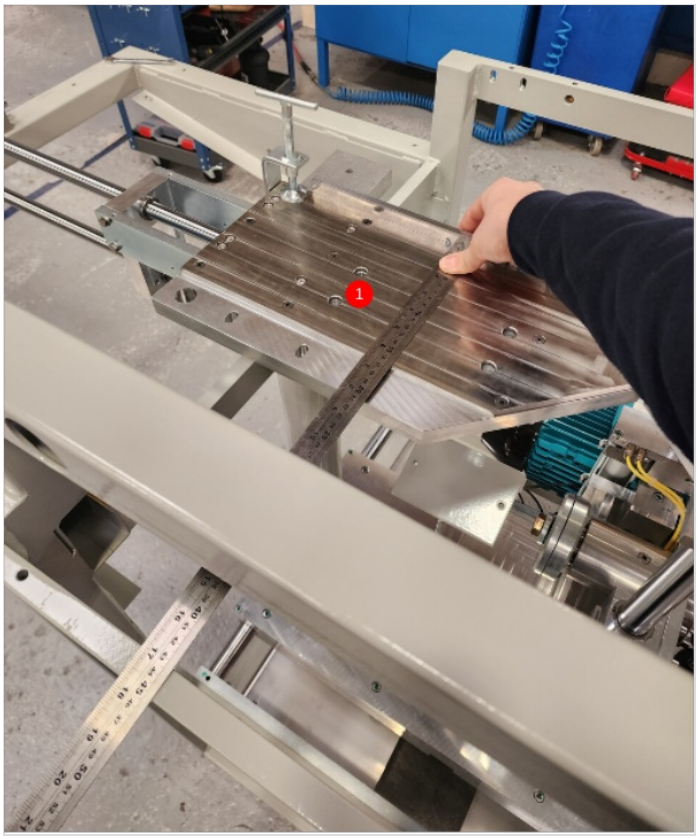

## Step 8 - Check parallel

1 Use Steel rule to measure from pads to rear fence mount on frame from both tables as shown

2 Measurement neds to be the same (+- 1mm)

3 Use adjustment in pads, and pillar supports to correct

4 Ensure front alignment of tables is checked after adjusting. Ensure alignment and parallel are both met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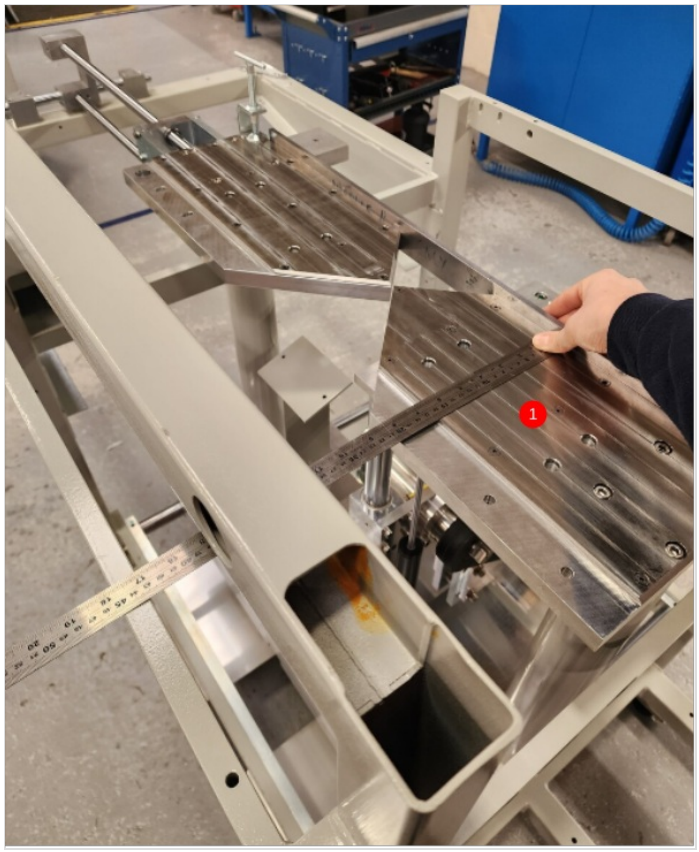
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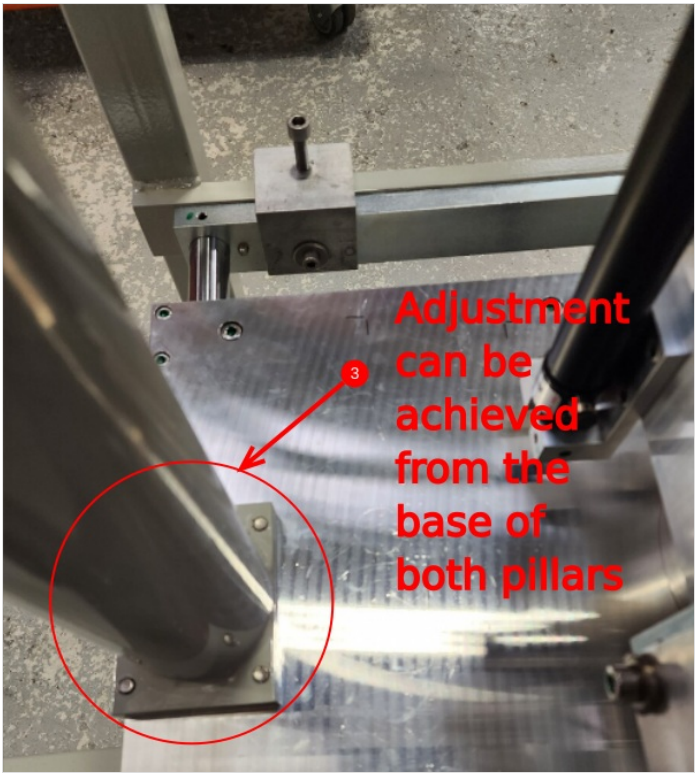
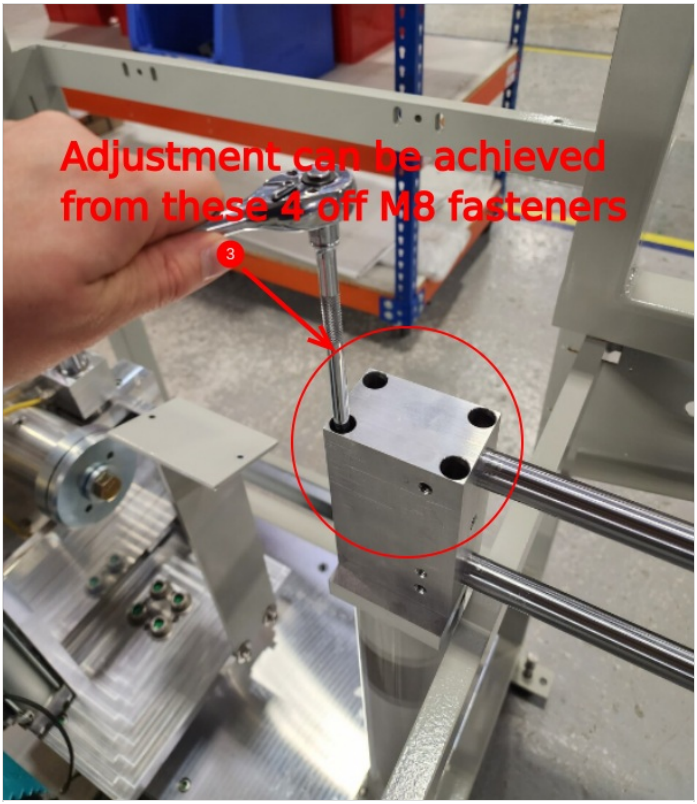
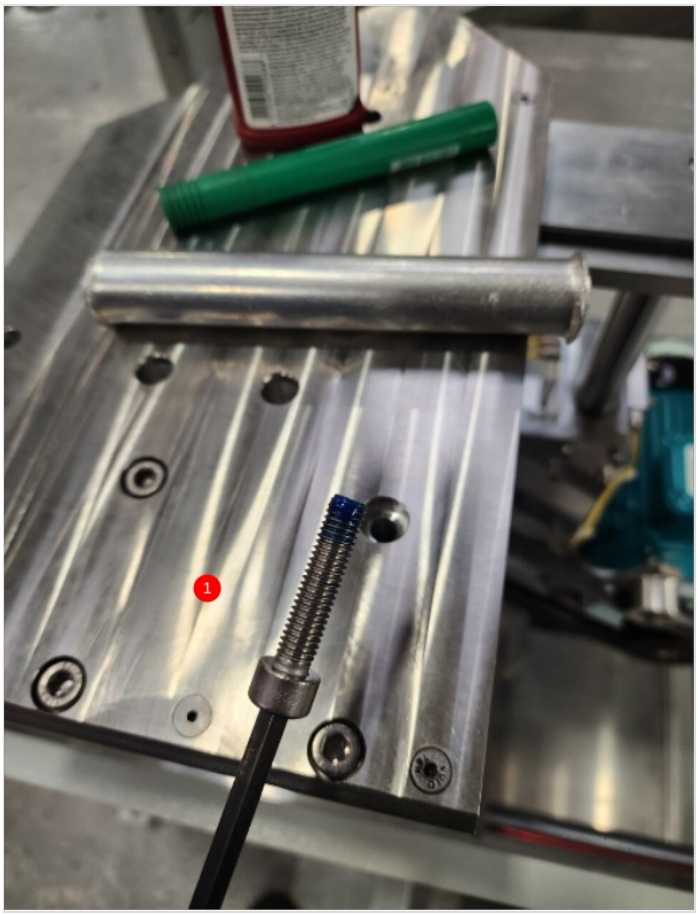

Adjustment
can be
achieved
from the
base of
both pillars
3


Adjustment can be achieved
from these 4 off M8 fasteners
3


## Step 9 - Finalise fasteners and torque settings

Finalise all fasteners in the order as shown, check alignment after each component has been finalised ,so if movement occurs, it can be easily identified which component has moved

1 Cut table M8 socket caps 4 off . Remove fasteners individually and apply 243 and final tension to **40nm with torque Wrench**
2 Support pillar Base. Apply final tension of **40nm with torque Wrench** to 4 off m8 socket caps, apply Loctite 290 to exposed thread after tensioning
3 Repeat step 2 for second Support pillar Base
4 Eject shaft support. Remove 4 off fasteners individually and apply 243 and final tension of **40nm with torque Wrench**
5 Tie bar set bolts 8 off. Remove individually and apply 243 and add final tension
6 Eject table M6 socket caps 6 off. Remove individually and apply 243 and add final tension Remove individually and apply 243 and add final tension
7 Eject bearing blocks 4 off M6 socket caps. Remove individually and apply 243 and add final tension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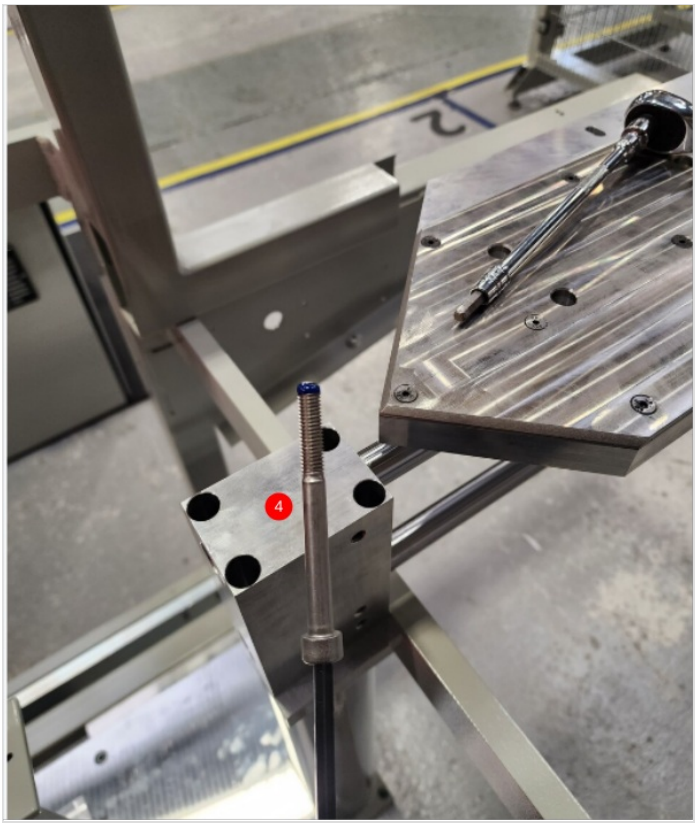
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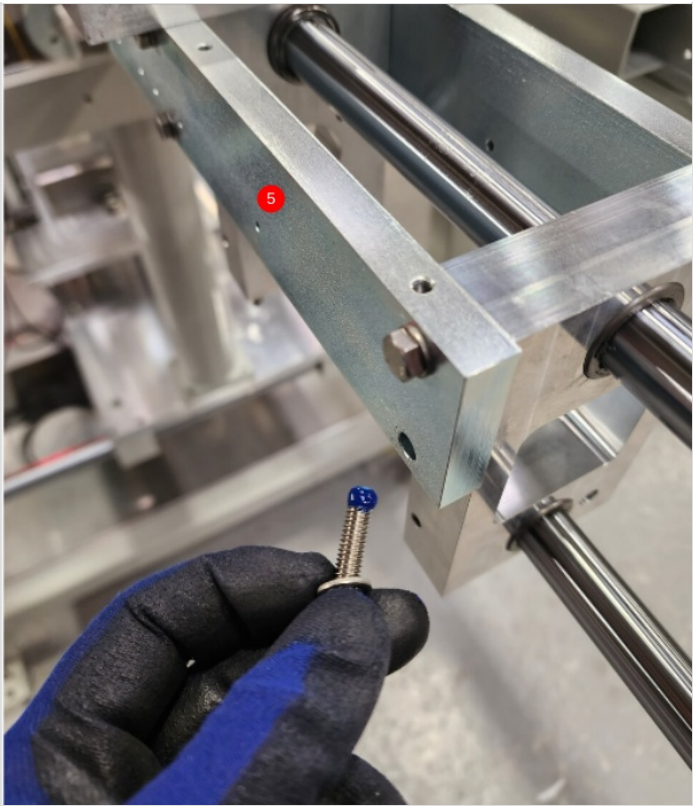
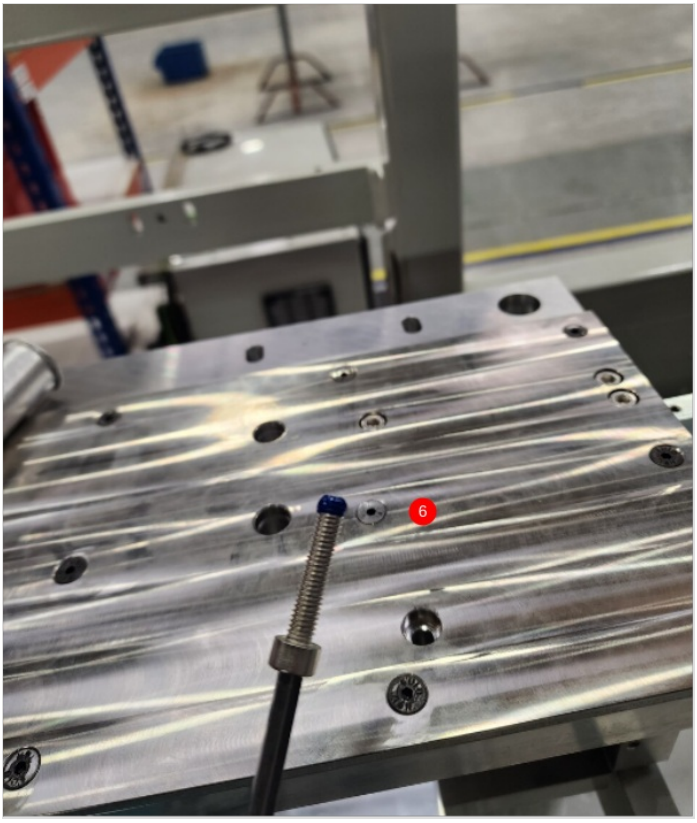



## Step 10 - Quality check

All cut table settings to be checked and signed off by supervisor once final tension is added to all fasteners

# Step 11 - Set Blade squareness

Attach blade jig to spindle

Lift saw head to upright position and hold with spacer

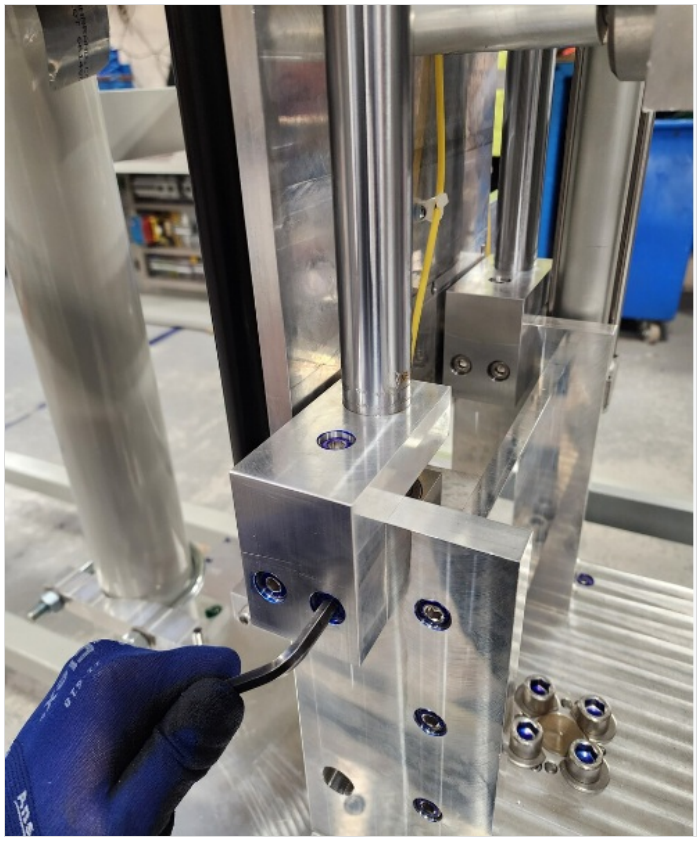
**Relieve tension on 2 off M8 grubscrews at base of cut shafts**

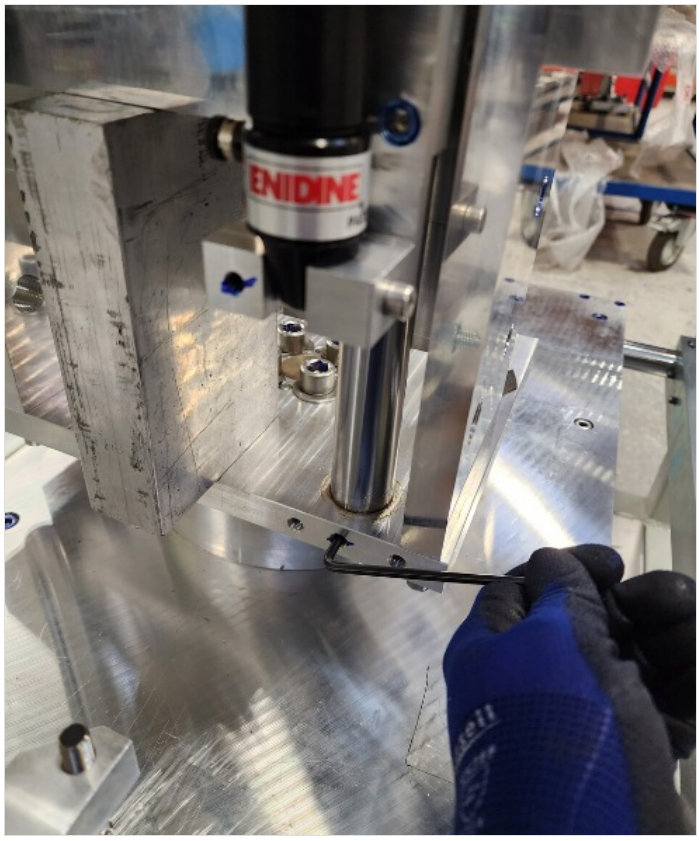
Adjust squareness using 2 off brackets fixing clearance.

Ensure brackets are adjusted evenly

finalise all fasteners once set and recheck squareness

Remove blade setting jig






## Step 12 - Quality Instances

Please ensure the following steps for eject cylinder alignment and position setting are followed accurately

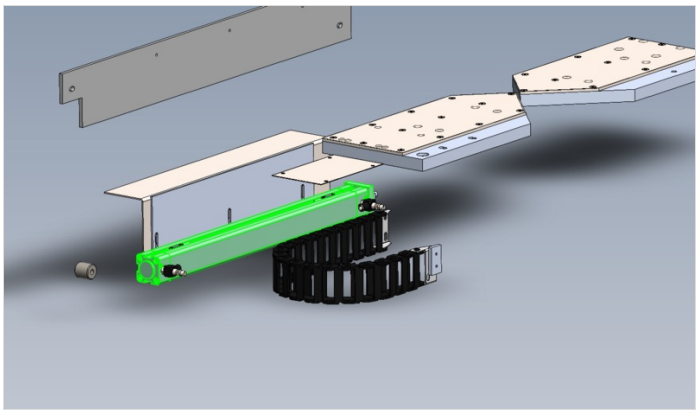
Quality instances have been raised for cylinder not being aligned correctly and also eject cylinder stroke position not being set

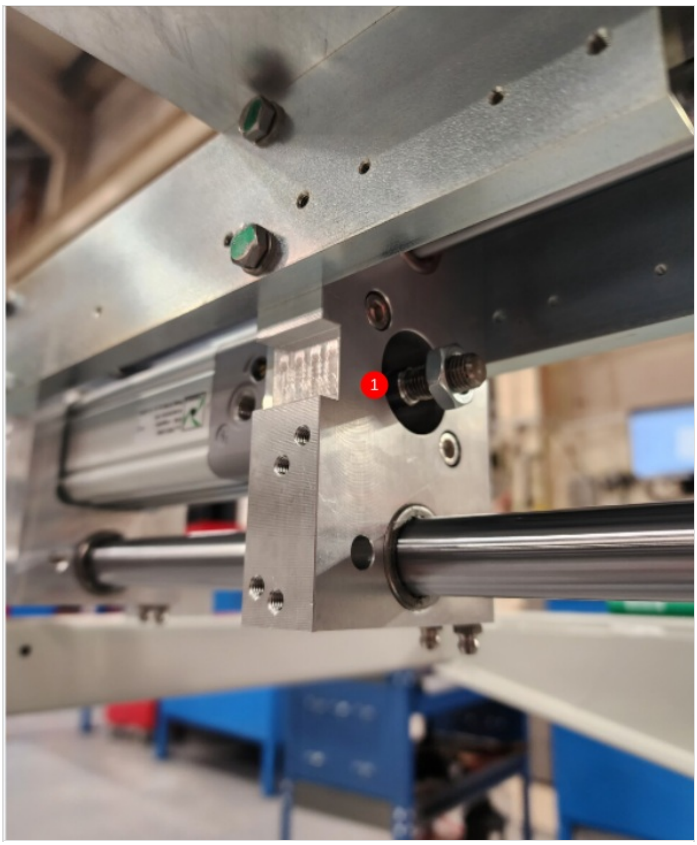
# Step 13 - Fit eject cylinder

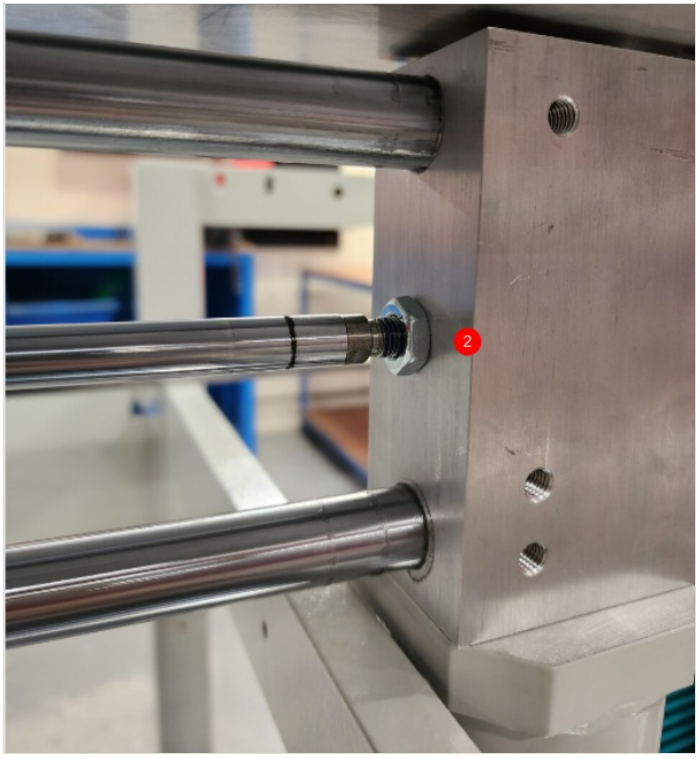
1 Fit eject cylinder with spacer using 2 off M6 x 40 socket caps

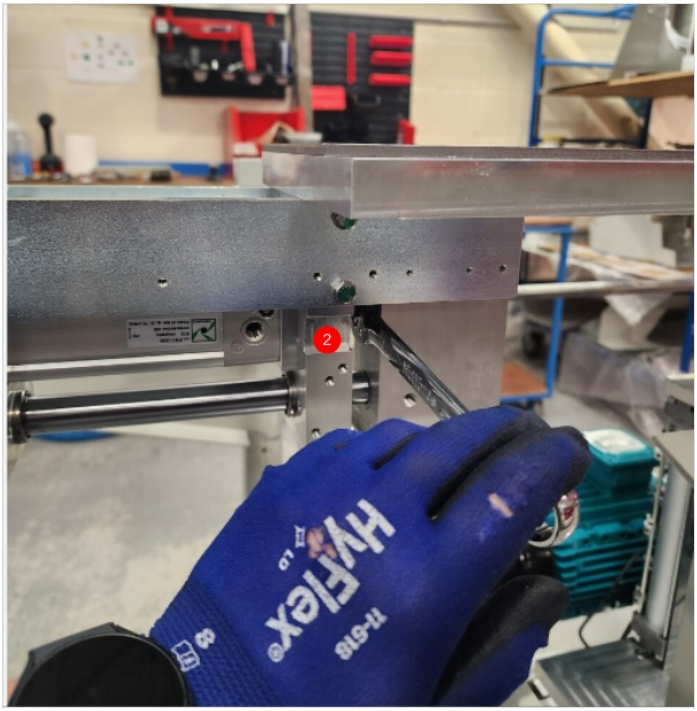
2 Ensure alignment by tensioning fasteners with the cylinder in the closed position

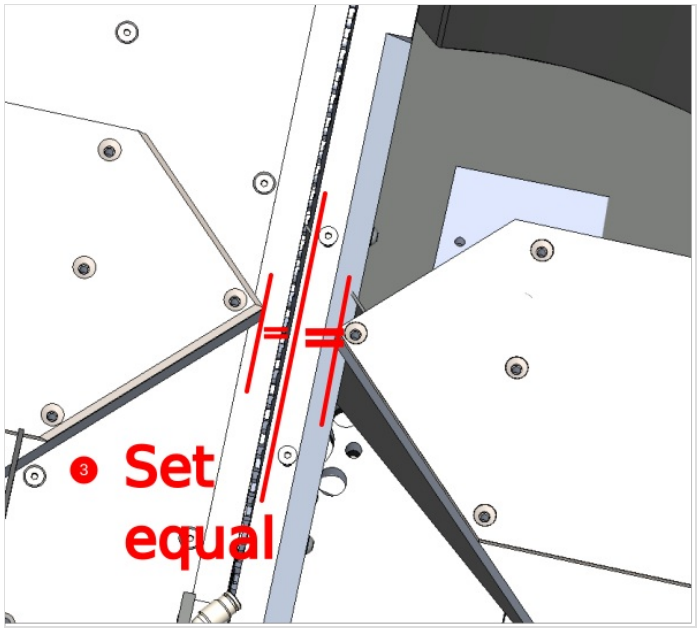
3 Ensure correct position of cylinder thread adjustment. Set so eject table is spaced the same amount away from cut blade as the fixed cut table
4 Check movement is smooth and consistent , with no tight spots at ends of stroke of cylinder





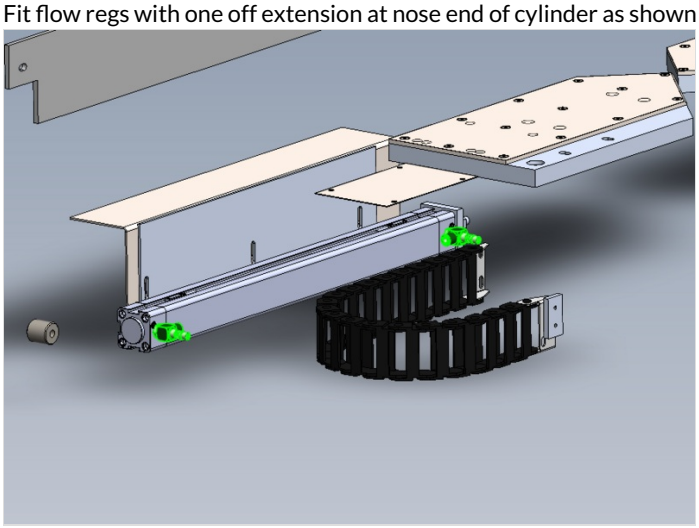



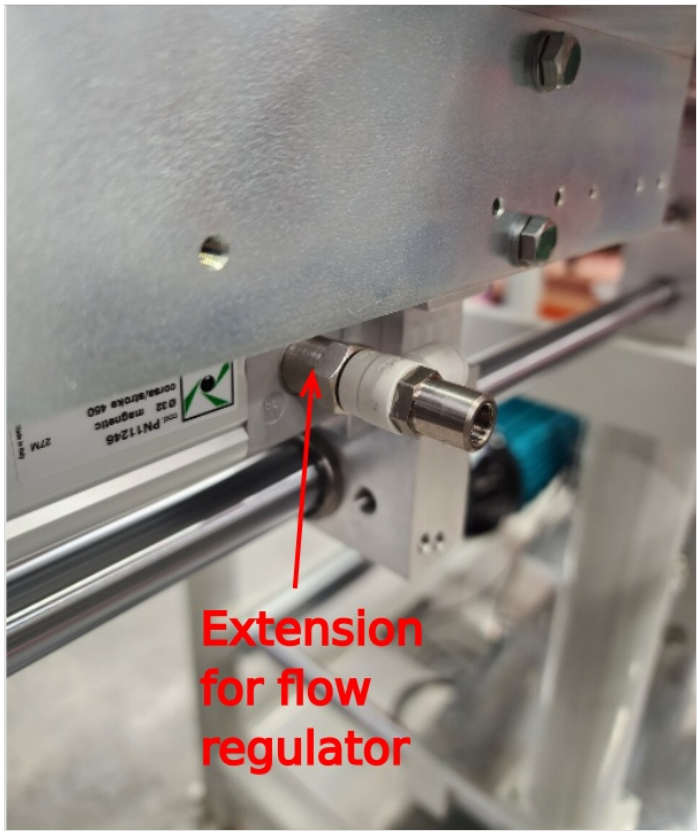






## Step 14 - Fit Cylinder fittings

Fit flow regs with one off extension at nose end of cylinder as shown





## Step 15 - Fit and set reed switches

2 off reed switches dupplied by electrical department

Identifications are X 141 and X 142

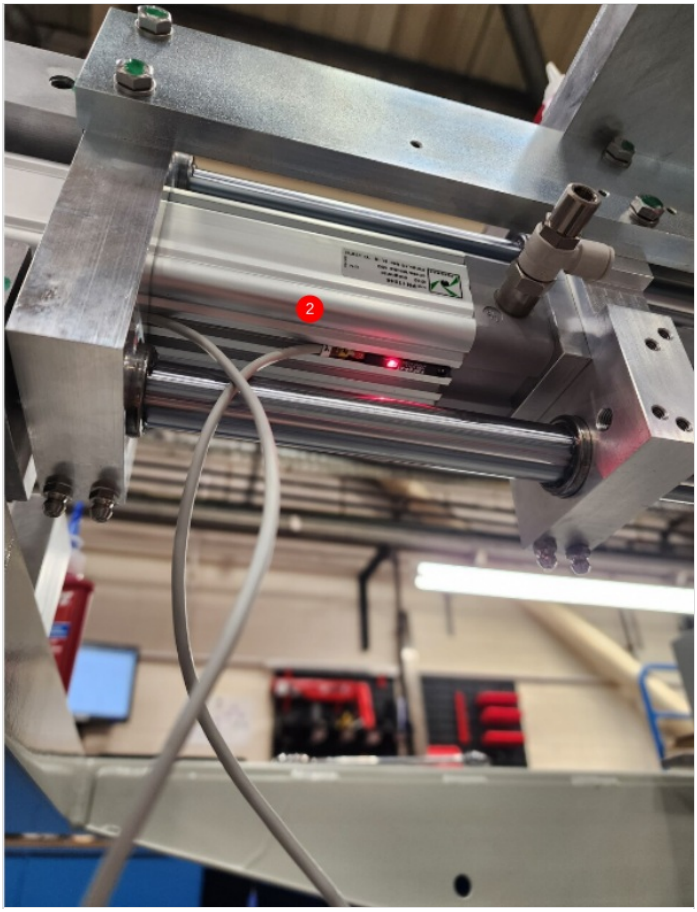
1 Fit X141 to cylinder as shown and use test box to set switch when cylinder is contracted in position

2 Fit X142 to cylinder as shown and use test box to set switch when cylinder is in the extended position

3 Captivate cables with tie wraps as shown


1


1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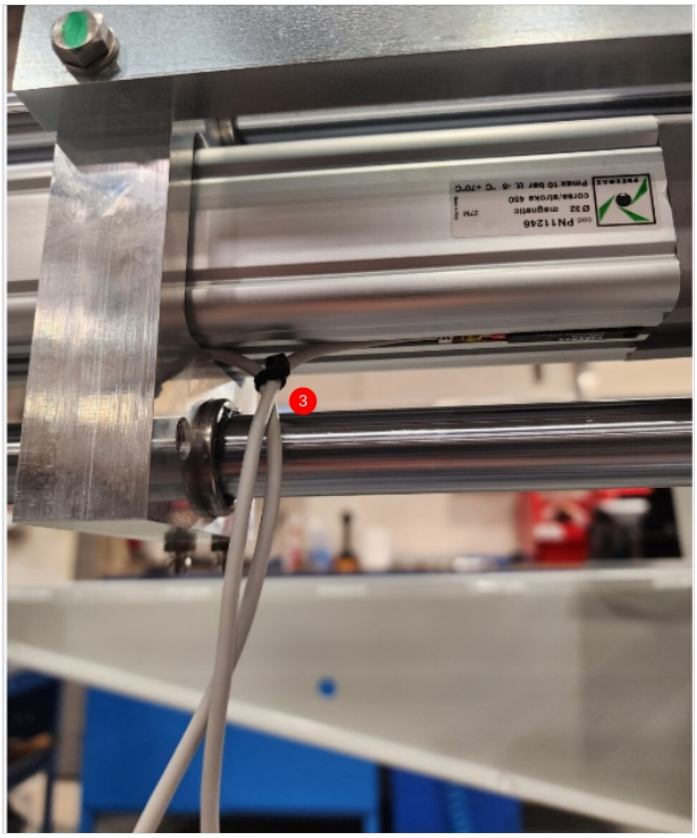




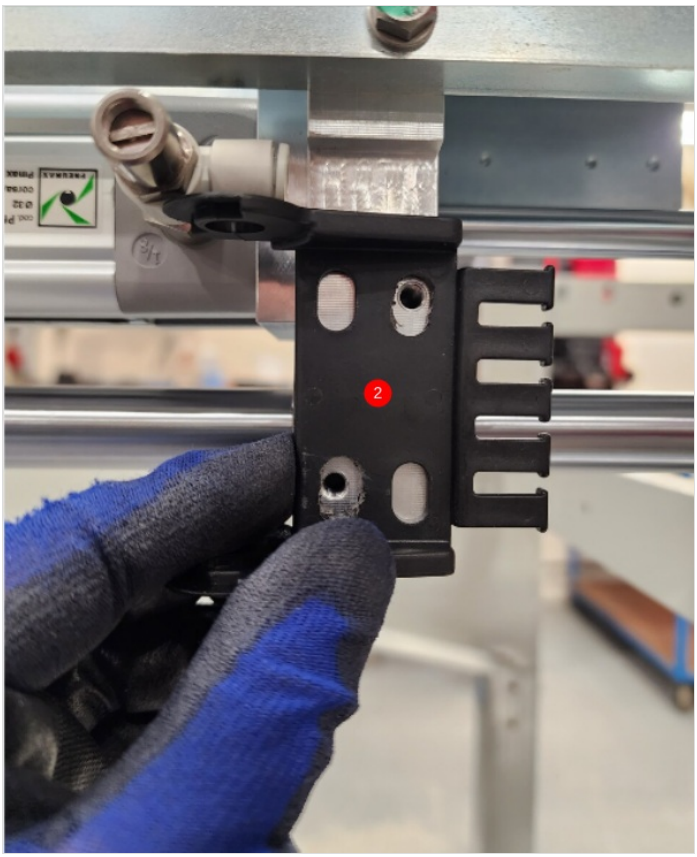
## Step 16 - Drill off fixing hole in energy chain bracket

1 Drill off to suit fixed energy chain bracket to match frame fixing point as shown

2 Modify pivoting bracket as shown to suit mounting point


1


1

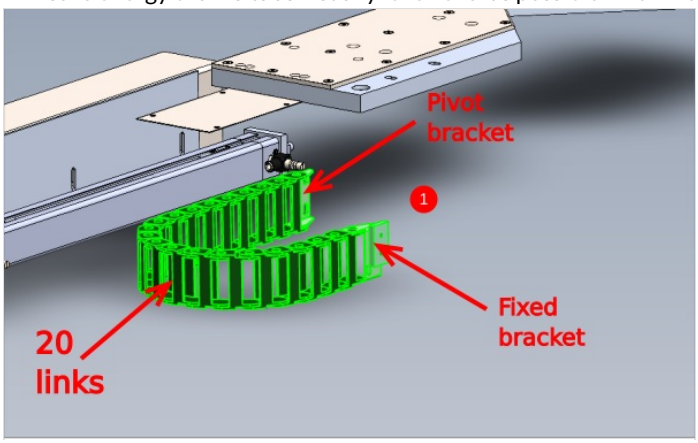

2

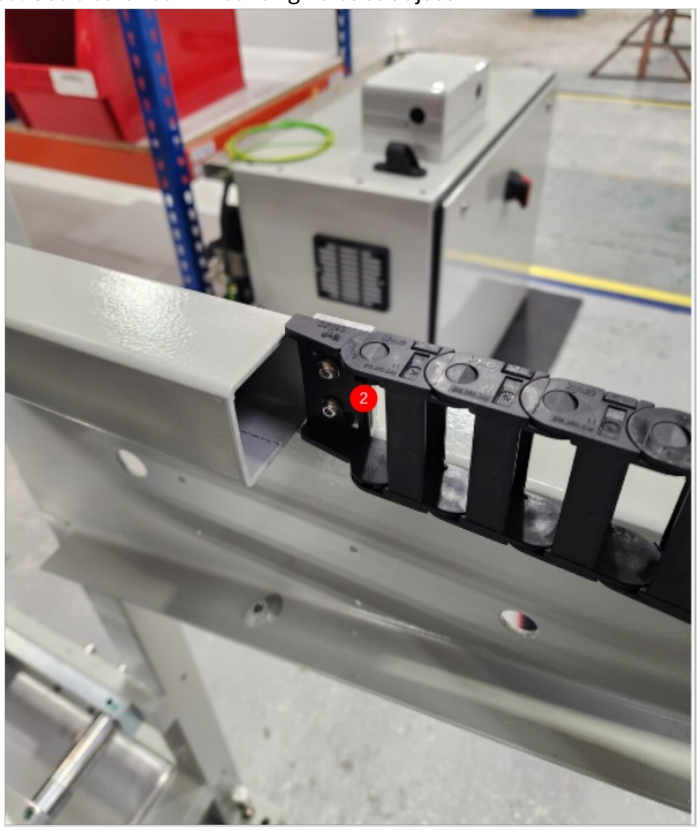
# Step 17 - Fit energy chain

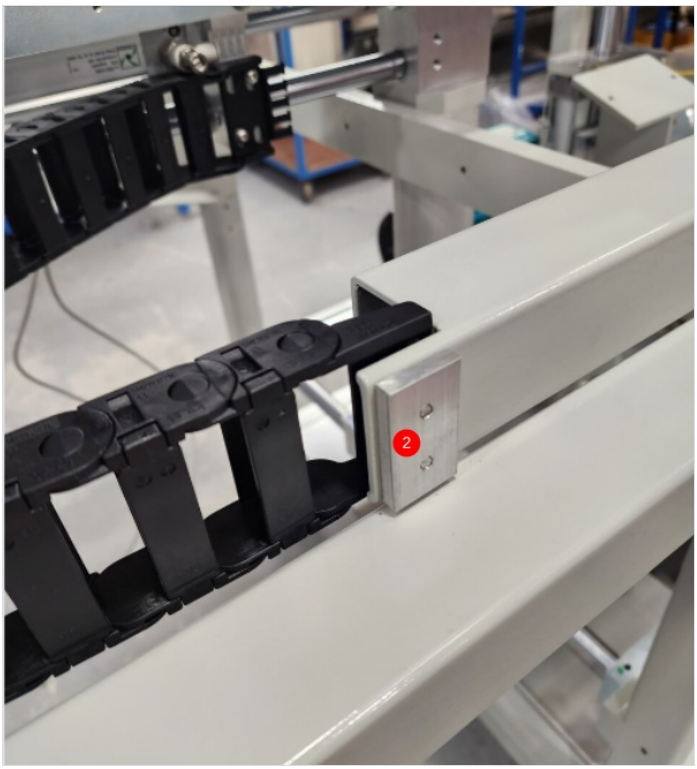
1 Assemble energy chain as shown with 20 links of energy chain and pivot and non pivot brackets

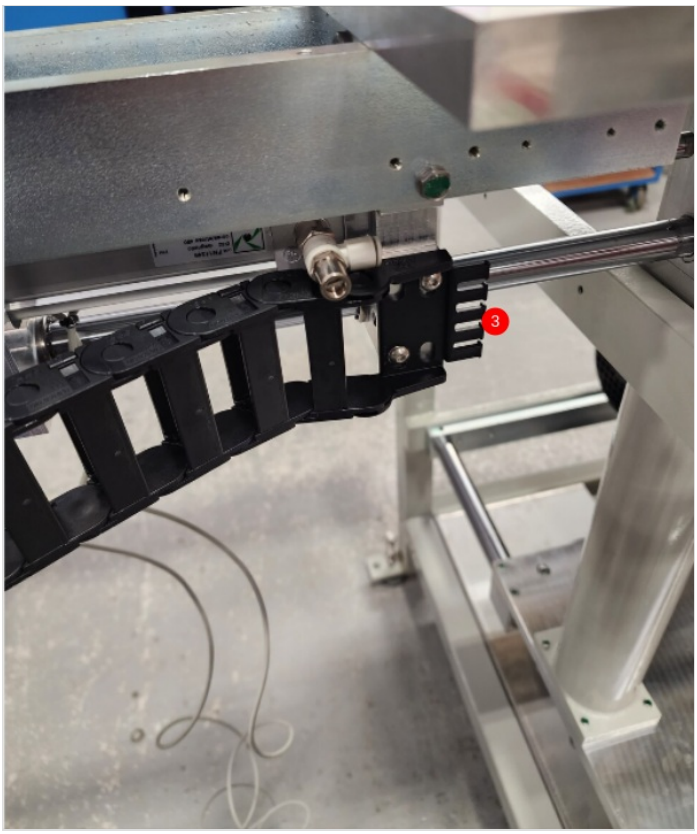
2 Fit energy chain with backing plate to fixed end as shown. Use M5 x 16 button sockets and 2 off and M5 motor plate washers as shown

3 Ensure pivoting bracket is fitted to correct end, and fix with 2 off M5 x 10 button sockets and M5 motor plate washers
4 Ensure energy chain sits as visually level level as possible when mounted. Use clearance in mounting holes to adjust



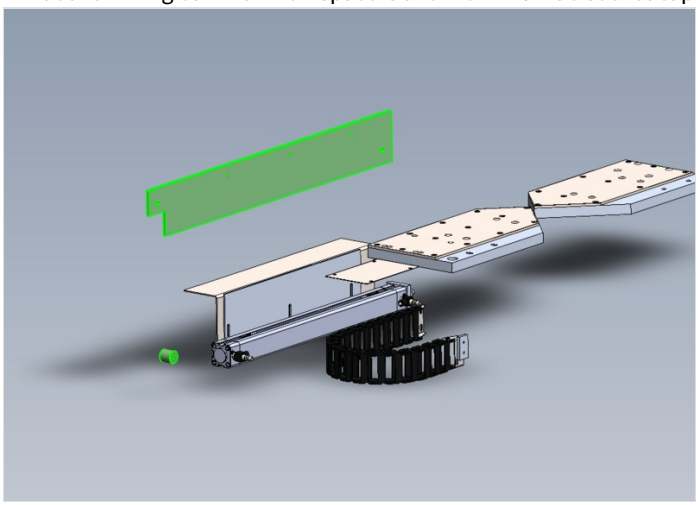



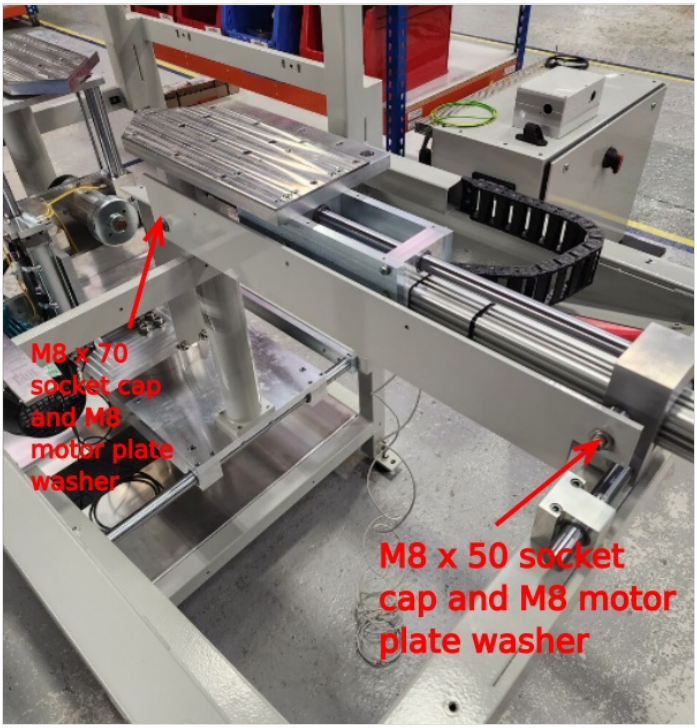



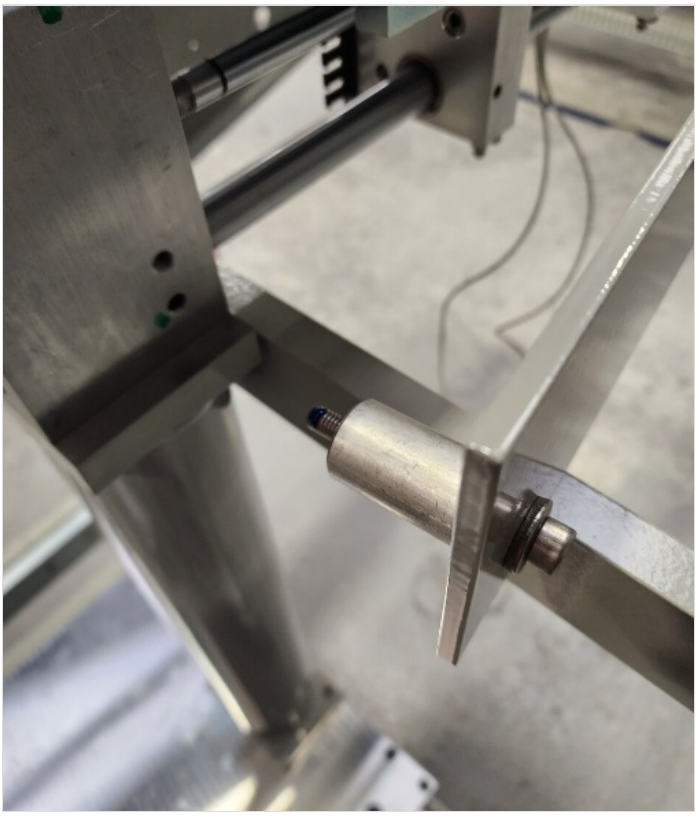



# Step 18 - Fit cover fixing bar

1 Tap holes to clean m5 threads in cover fixing bar
2 Fit cover fixing bar with 2 off spacers and 1 off M8 x 50 socket cap and 1 off M8 x 70 socket cap. Use 2 off M8 motor plate washers



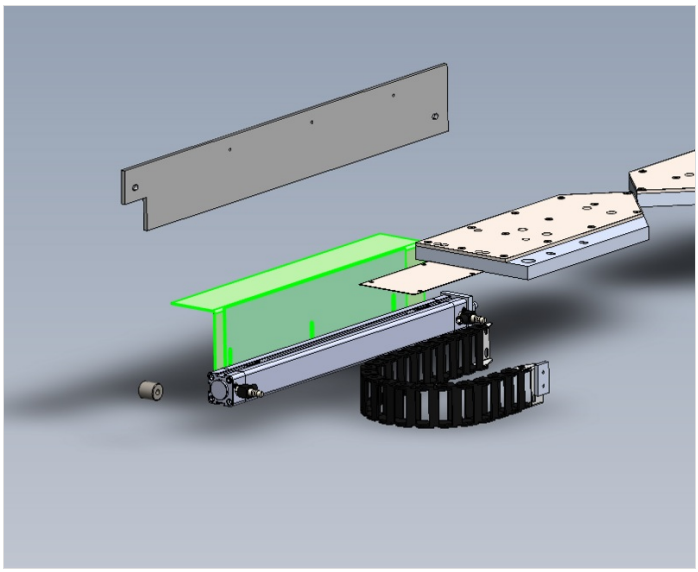


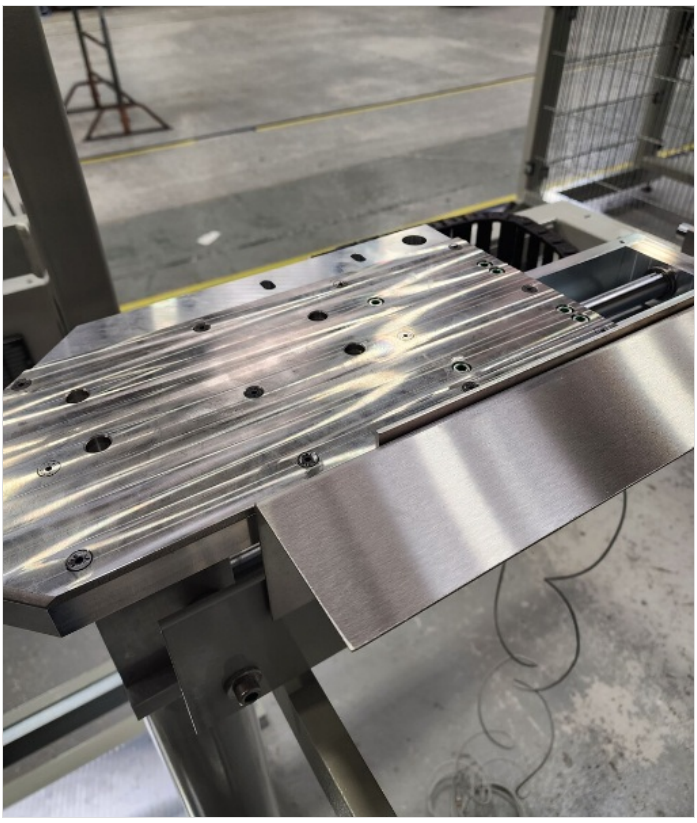



# Step 19 - Fit gap covers

Fit 2 off gap covers with m5 x 12 socket caps and M5 penny washers , do not add adhesive to these fasteners

Do not finalise position, leave gap closer plates in highest position possible and apply light tension to fasteners



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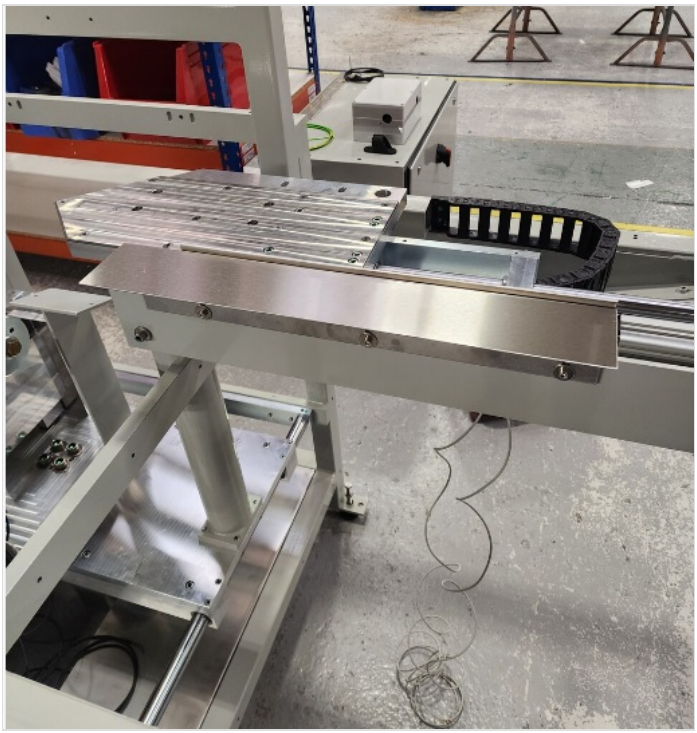

# Step 20 - Fit ejector cover

Fit ejector cover with 4 off M5 x 10 button sockets . No washers to be used