


R0015316 V notch Final Assembly

Final assembly details

 Difficulty **Hard**

 Duration **6 hour(s)**

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Comments

Introduction

Tools Required

Standard Hex key set

Standard Spanner set

ZX5 Blade tightening tool

Compressed air connection with regulation (for axis support)

Parts required

A0001069 Energy Chain Series B15.050 (48mm radius) Openable x 2

A0001070 Igus Mounting Br Set for A0001069 Non-Pivot x 2

B0000046 Slide Base Bearing Block (Straight Grease Nipple) x 4

B0000173 Blanking plug foc x 28

B0000426 Linear Rail MSB25 400mm Long (AMT) x 4

D0015156 Saw Bearing Plate x 2

D0015161 Saw Plate x 4
 D0015162 Saw Mid Spacer Bar x 1
 D0015163 Saw Bearing Spacer Bar x 1
 D0015168B Balance Cylinder Bracket x 2
 D0015169B Cylinder Rod Bracket x 2
 D0015179 Energy Chain Bracket x 2
 D0015180 Datum Switch Bracket (VZ) x 1
 D0015183 VY Stop x 2
 D0015235 VY Datum Switch Bracket x 1
 D0015236 VY Energy Chain Bracket - Fixed x 1
 D0015237 VY Energy Chain Bracket - Moving x 1
 D0015250 Safe Sensor Block x 1
 D0015251 Safe Sensor Finger x 1
 D0015440 Spacer: Ø12.7 x 36, M6 tap thru x 2
 D0015452 Scissor Cable Retainer x 1
 D0015541 Energy Chain Deflector x 1
 D0015704 Energy Chain Support Plate x 1
 E0000336 Sensor: M8; 2mm, PNP N/O, M8 conn x 2
 E0001185 Elte Saw motor x 4
 M0001087 Rubber Bump Stop M6 Ø20x24 x2
 P0000010 1/8 6mm elbow x 1
 P0000022 Fitting: Brass Reducing Bush 1/4 - 1/8 BSP x 1
 P0000023 Fitting: Hex Nipple 1/8 BSP x 1
 P0000026 Silencer 1/4 BSP x 1
 P0000050 Fitting: Silencer 1/8" BSP x 1
 P0000077 Straight Adaptor 8mm - 1/8BSP x 1
 P0000140 Fitting: Quick Exhaust Valve 1/8" x 1
 P0001040 Fitting: 1/8BSP Hex Head Silencer x 2
 P0001041 SMC Reed Switch Mounting Bracket BJ3-1 x 2
 P0001133 Cylinder: Ø50 x 500 x 2
 P0001134 Floating Joint M18x1.5 x 2
 P0001140 Pilot Check Valve: 8mm to 1/4" BSP x 2
 P0001141 Fitting: SMC Flow Controller Elbow Ø8-1/4BSP x 1
 P0001142 Adjustable Damper 150mm stroke (3000N) x 1
 P0001144 Reed Switch Mounting Band for Ø50 cyl x 2
 R0015084 Bench assemble and Drill Off Swarf chutes
 V0000028B-ZX5 Notching Blade: Ø300 x 96 teeth x 2.8mm pl x 3.3mm kf x24mm x 4

Step 1 - Unless otherwise stated

Use loctite 243 on all fasteners

Use loctite 572 on all threaded pneumatic connection

Pen mark all fasteners to show finalised



Step 2 - Fit Bearing rails

Fit 4 off B0000426 Linear Rail MSB25 400mm Long as shown

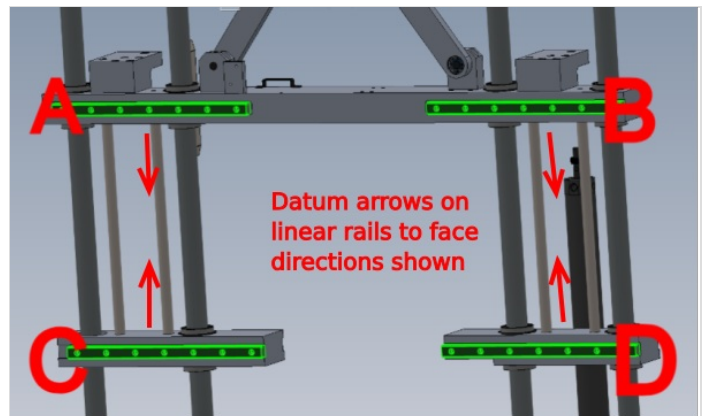
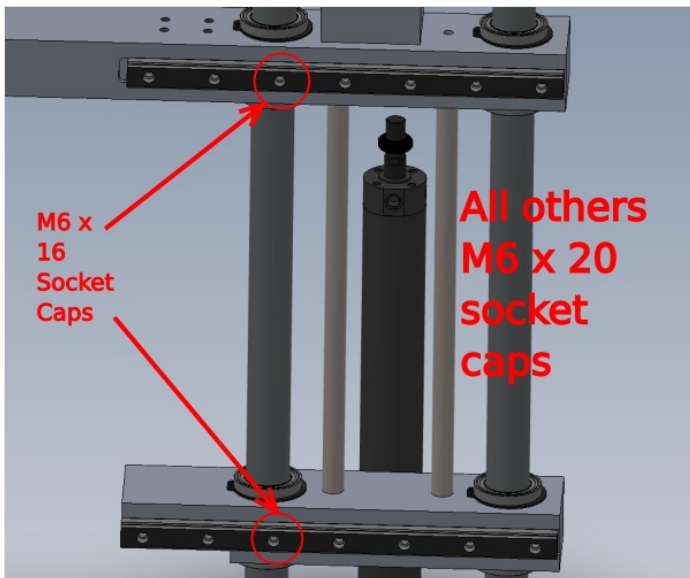
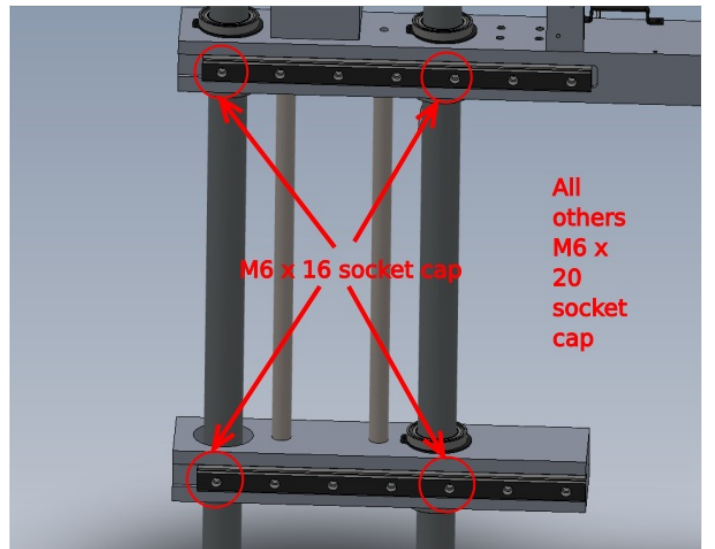
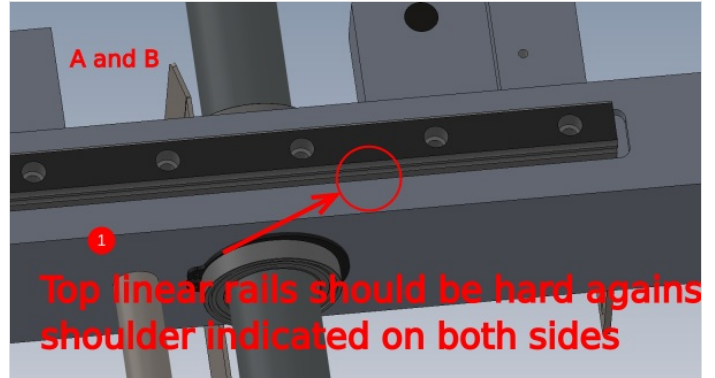
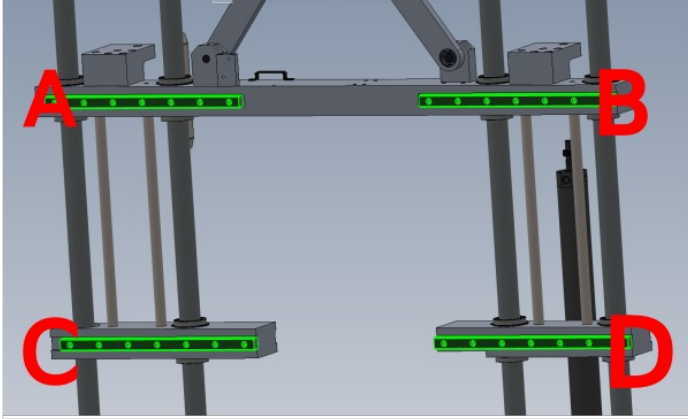
A and B can be finalised with fixings, C and D should be left loose for adjustment later

Use M6 x 20 and M6 x 16 socket caps at indicated points

Take care on the following notes as shown

1 Ensure correct witness faces are used

2 Correct fasteners are used at correct positions

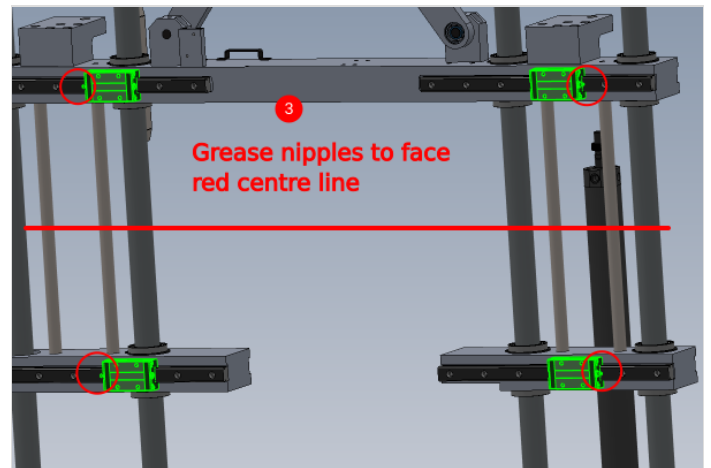
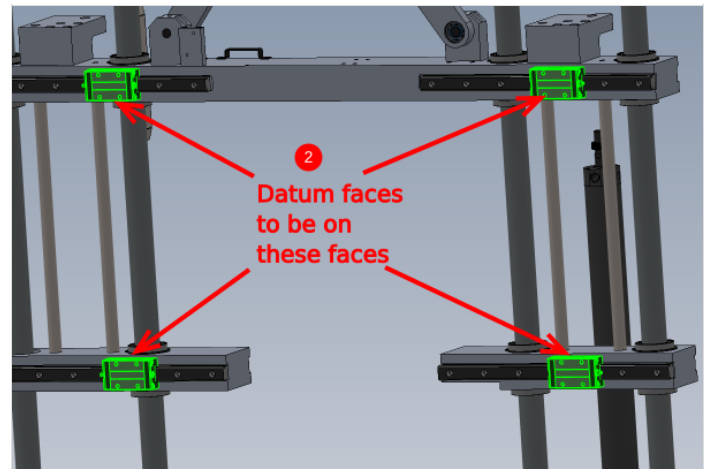
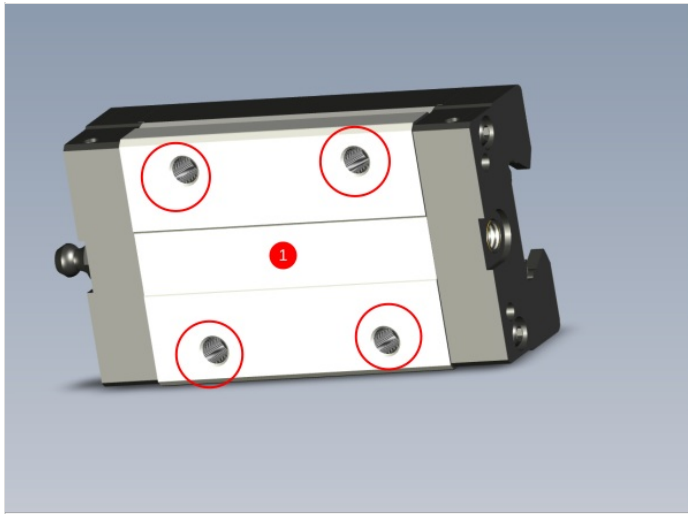


Step 3 - Fit Bearings

1 Thoroughly degrease B0000046 Slide Base Bearing Block fixing holes with FE10 solvent

2 Fit bearings to rails as shown. Ensure bearing datum face is orientated as shown

3 Slide Bearing to end of rails and fit supplied 45 degree grease nipple and orientate as shown



Step 4 - Attach Bearing plates

Attach 2 off D0015156 Saw Bearing Plate as shown, using fixings indicated

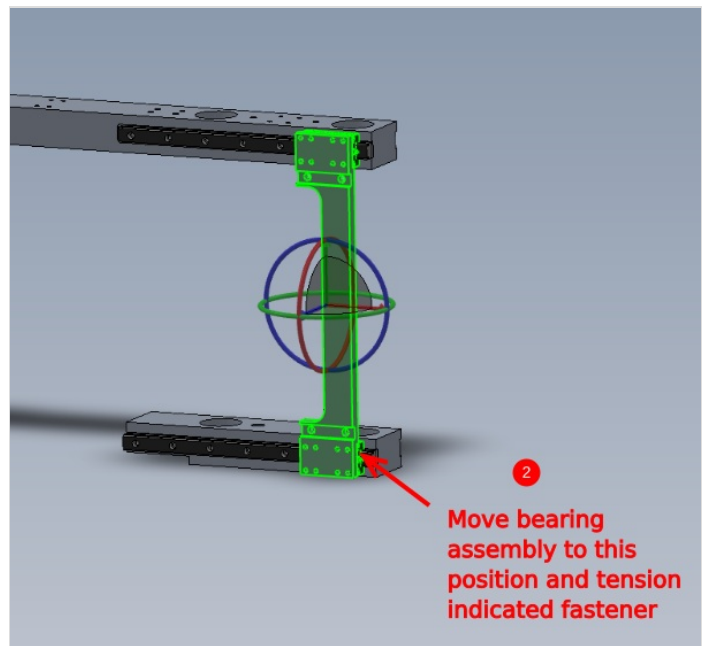
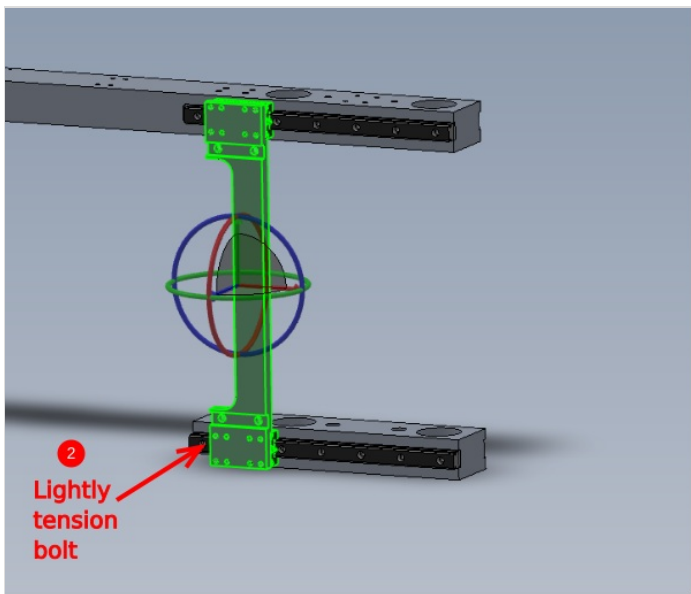
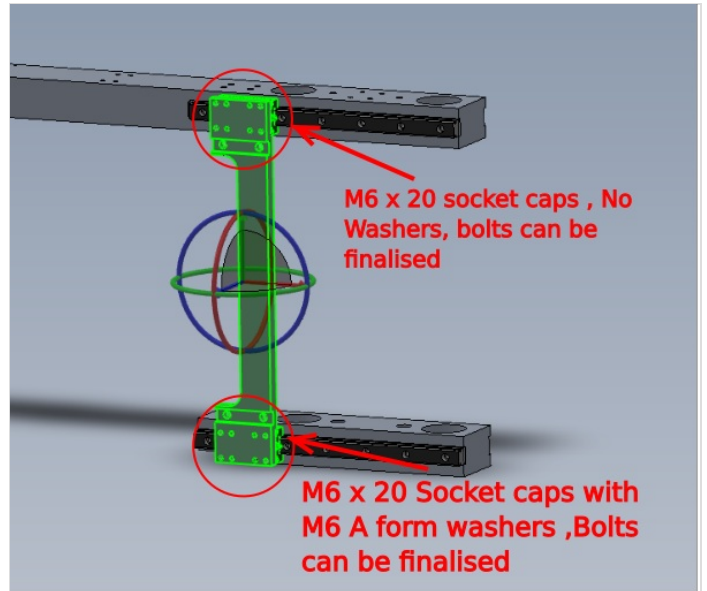
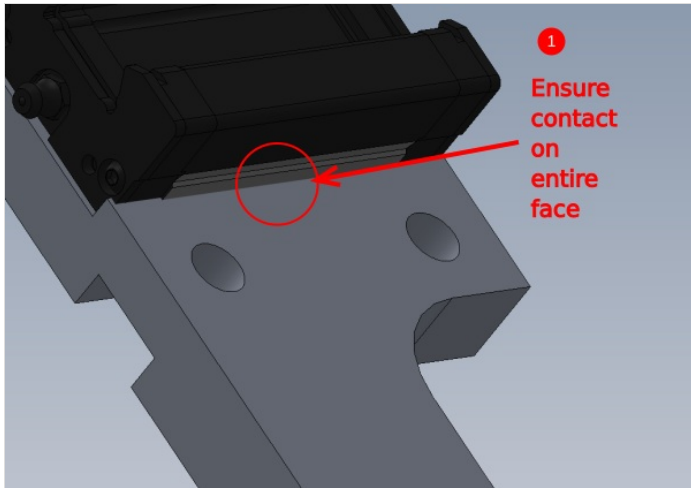
Observe following points

1 Ensure bearings are mated correctly to register on bearing block as shown

2 Use bearing plate with correctly mounted bearings to set position on lower bearing rail. Ensure rail position is set by bearing rail at both ends of travel

3 Finalise all Fasteners in lower bearing rail , adding adhesive and tension individually

4 Insert 28 off B0000173 blanking plug to linear rails. Ensure plugs are fitted accurately flush to top face of rail

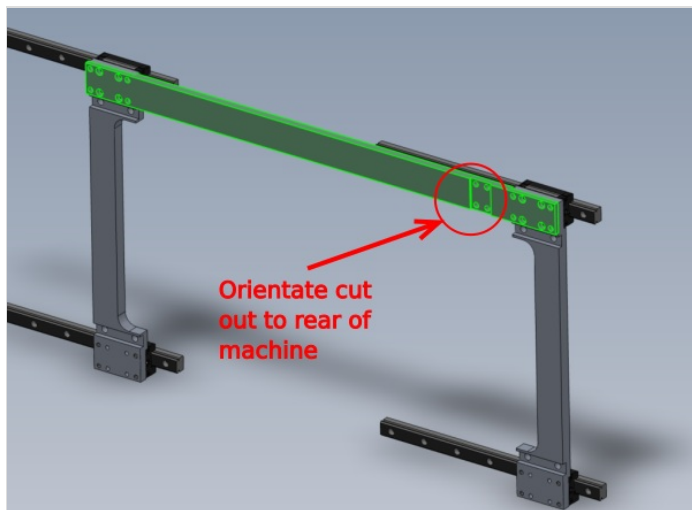
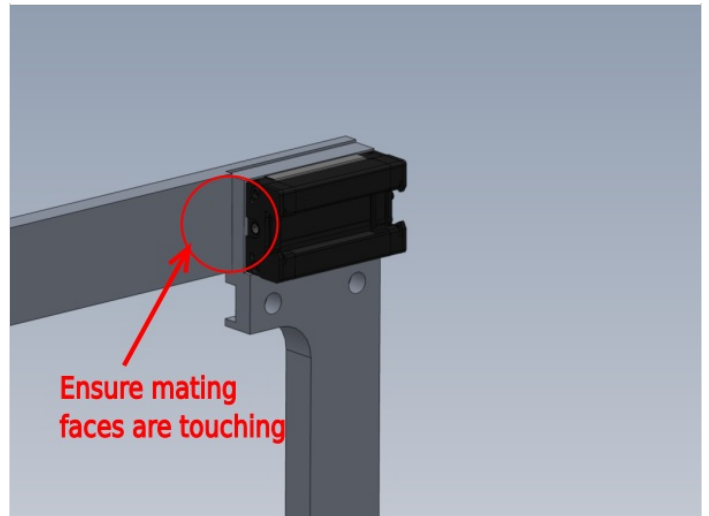
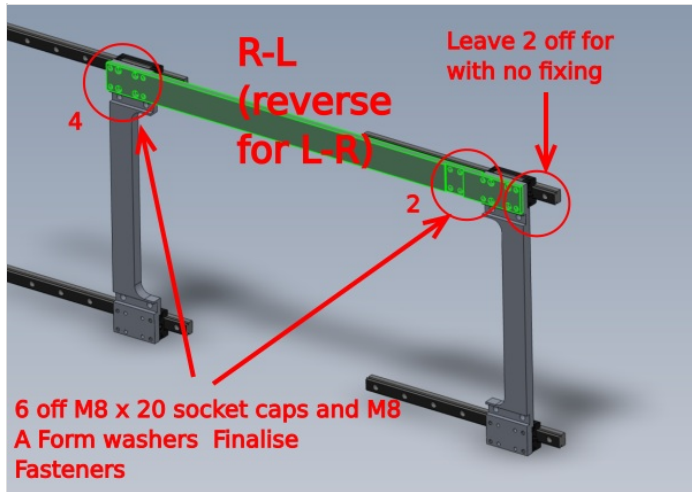


Step 5 - Add Spacer bar D0015163

Fix D0015163 as shown.

Ensure indicated mating faces are in full contact

Ensure cutout shown is orientated to rear of machine !!!



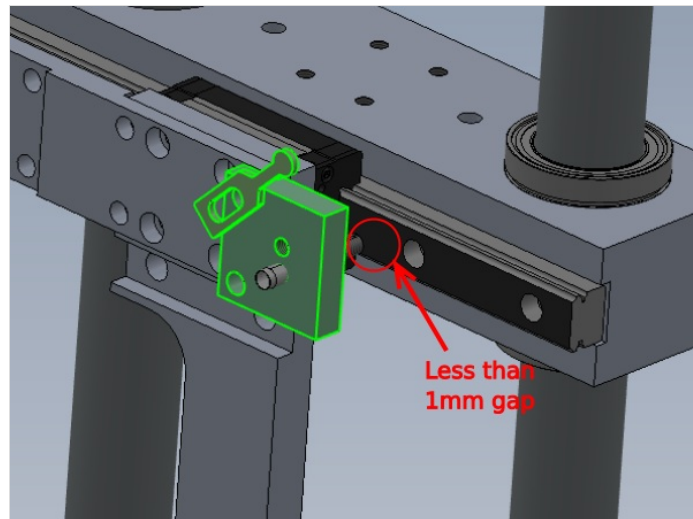
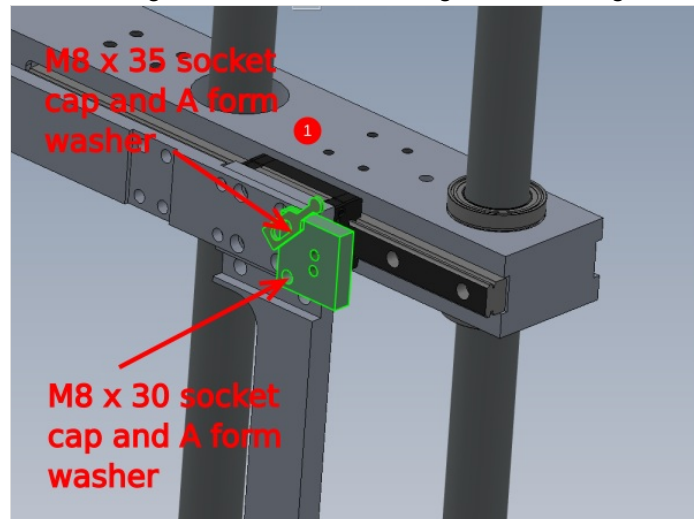
Step 6 - Add Vy datum bracket

1 Fit D0015235 VY Datum Switch Bracket as shown along with D0015251 Safe Sensor Finger

Note. This assembly always fits to the rear of the v notch assembly (for handing orientation)

2 Set E0000336 sensor as shown. Set to minus 1mm to face of bearing rail

Ensure locking nut for sensor is not over tightened as damage can be caused to sensor



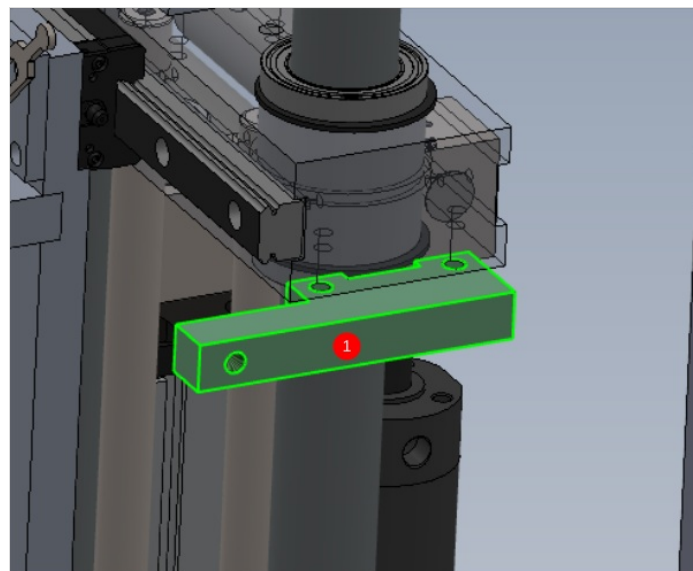
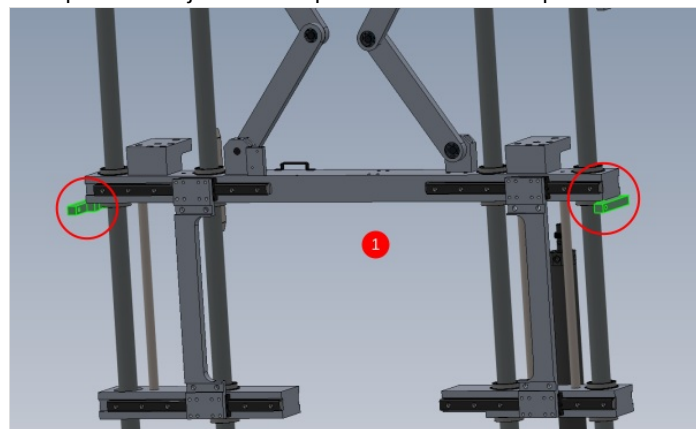
Step 7 - Add hardstops

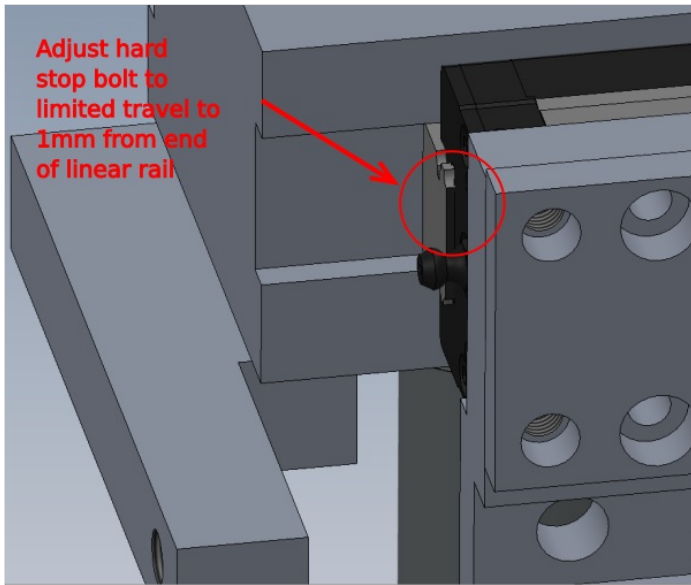
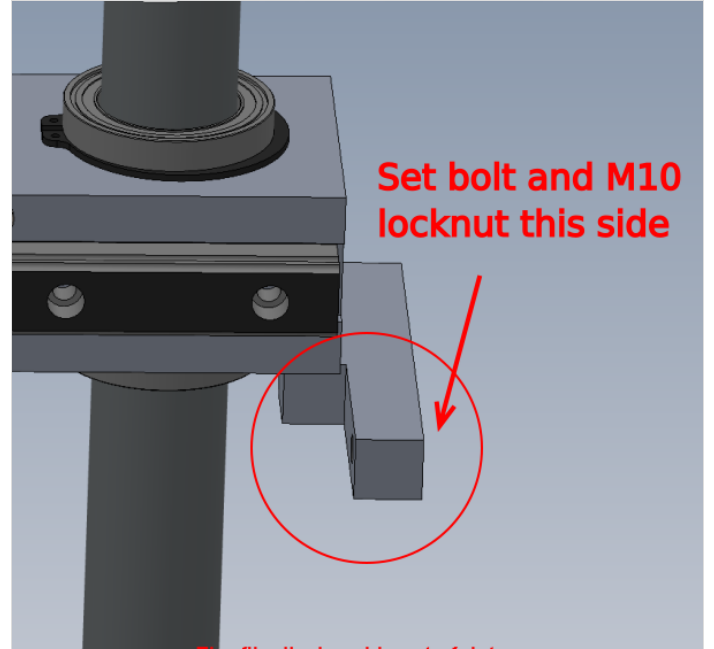
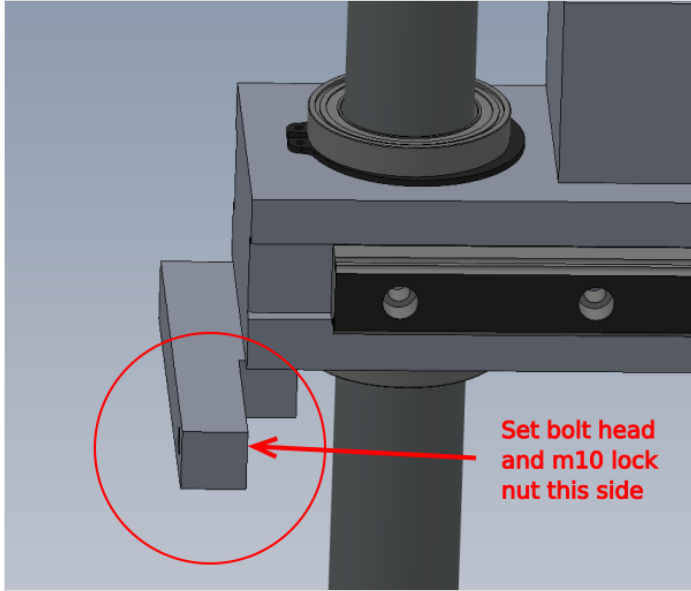
When fitting set bolts, face of bolt in contact with aluminium should be lished to give a smooth face when contact is made

1 Fit 2 off D0015183 VY Stop as shown. Fix with M8x 30 socket caps and A form washers and orientate as shown

2 Fit M10 x 50 set bolt and M10 nut as indicated.

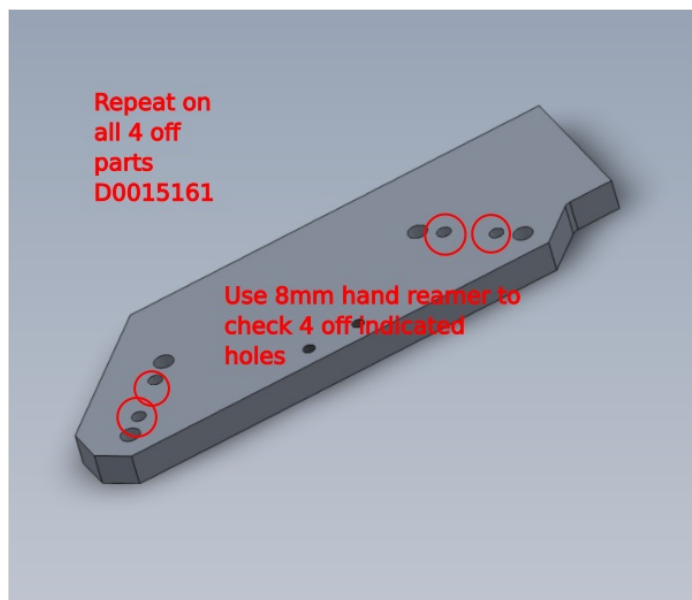
3 Set position. Adjust hard stop to achieve indicated position





Step 8 - check reamed holes in D0015161

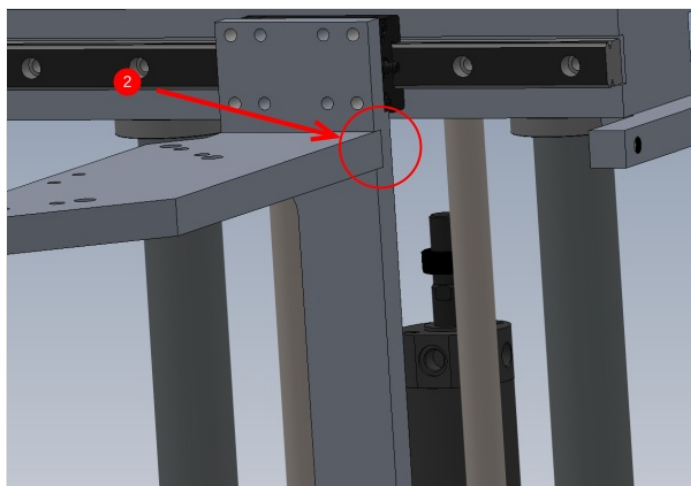
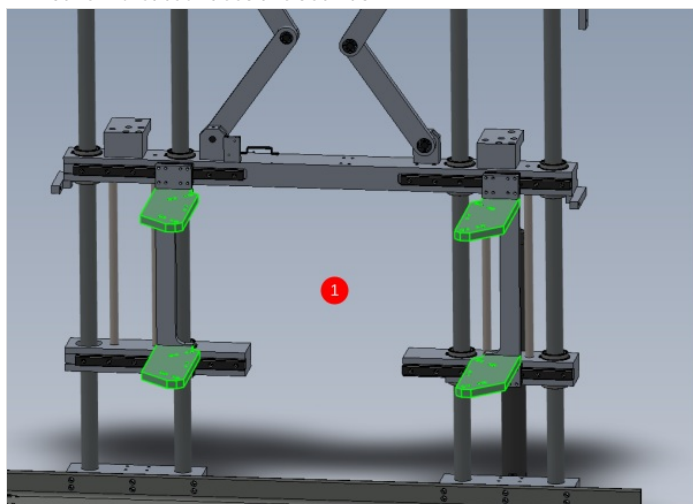
Use 8mm hand reamer to check reamed holes indicated are a good size for fitting



Step 9 - Attach Saw plates

1 Attach as shown 4 off D0015161 Saw Plate , using 2 off M10 x 30 socket caps and A form washers to fix

2 Ensure indicated faces are set flush

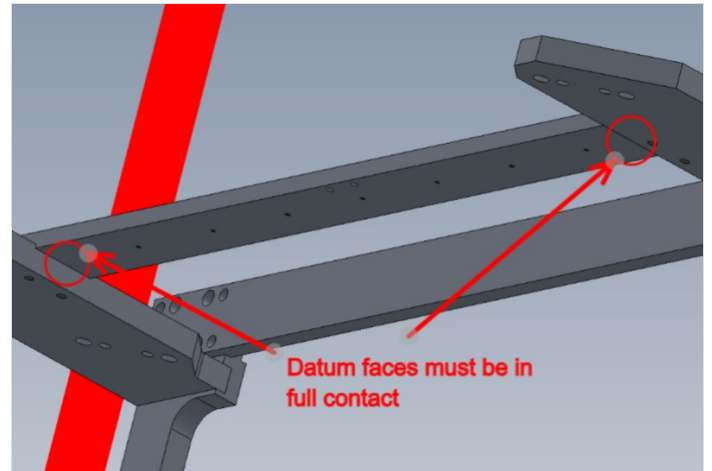
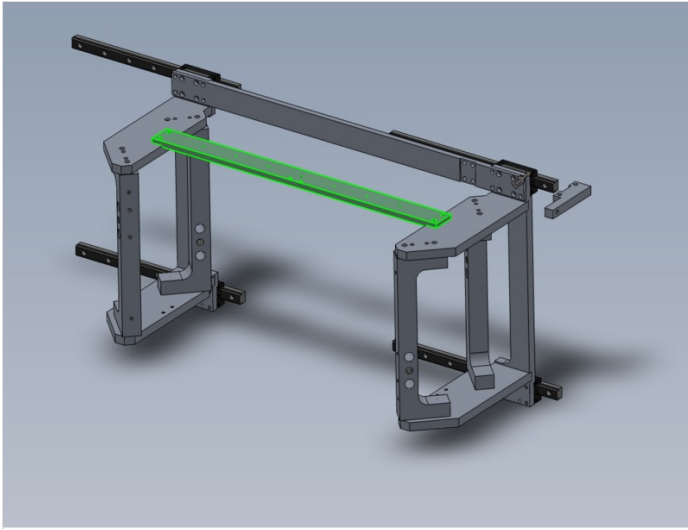


Step 10 - Attach D0015162

Attach joining plate as shown

Use 4 off M8 x 30 socket caps and A form washers

Ensure mating faces indicated are touching



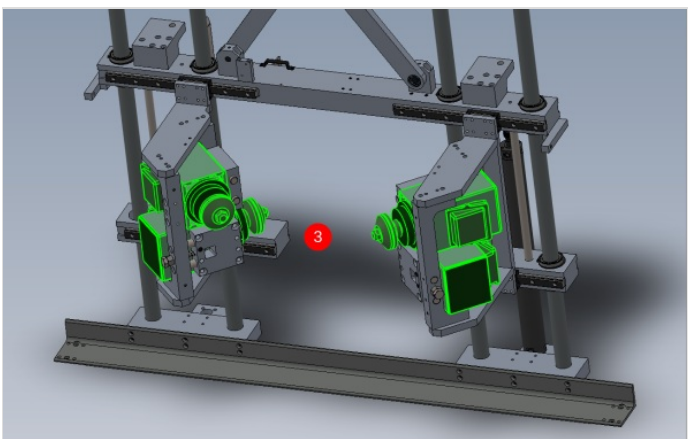
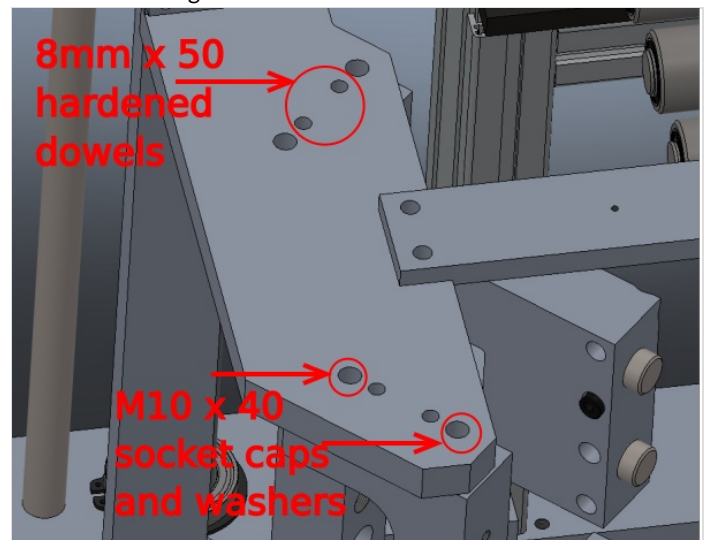
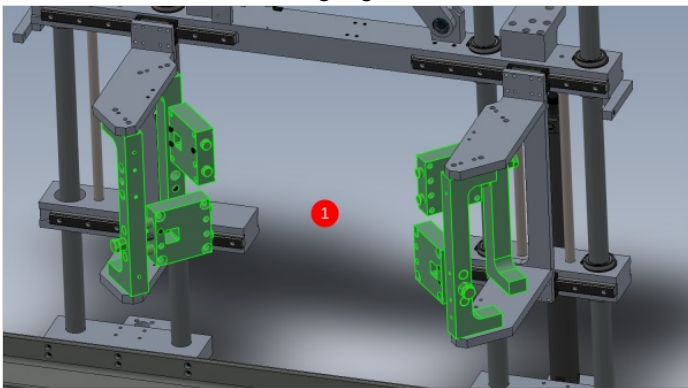
Step 11 - Attach motor assemblies

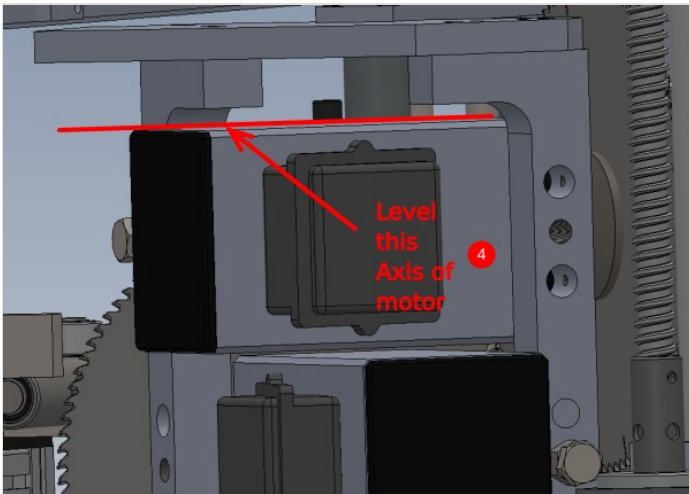
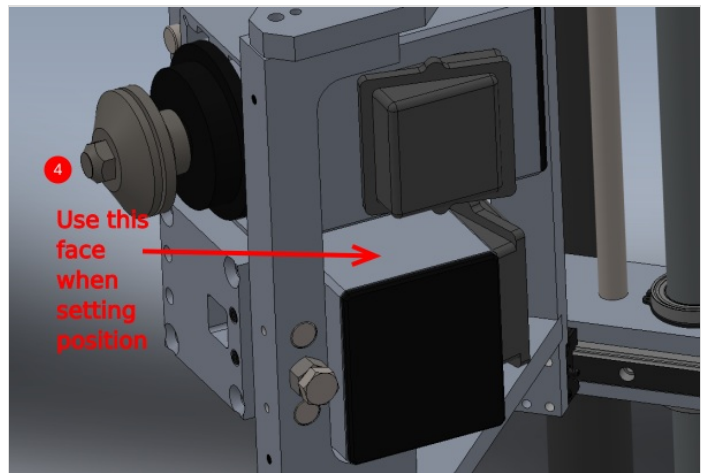
1 Attach 4 off pre build motor supports. Orientate as shown

2 Fix using 4 off M10 x 40 socket caps and A form washers, and 4 off 8mm x 50 hardened dowels per saw plate

3 Fit 4 off E0001185 Elte Saw motor as shown using 4 off M10 x 50 socket countersunk bolts per motor

4 Ensure motor is set level using engineers level on the indicated axis as shown when fitting motors





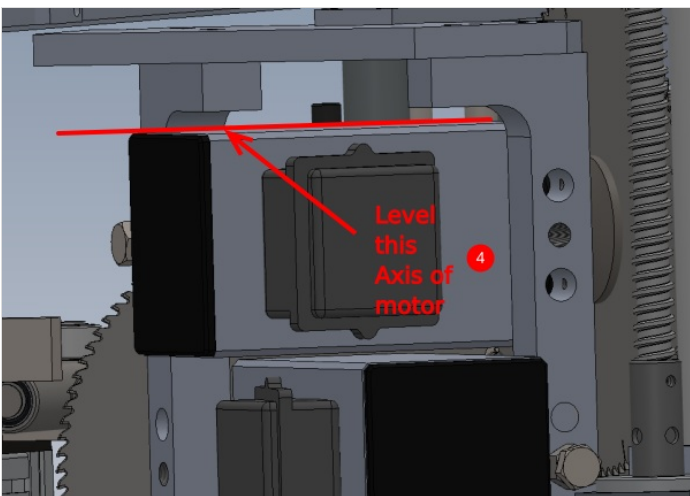
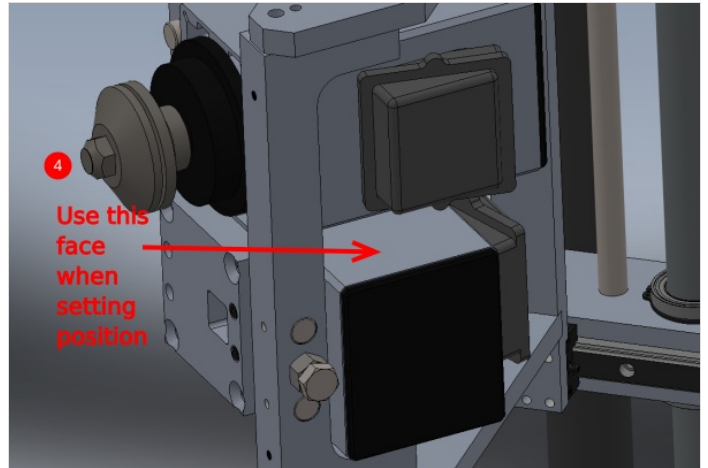
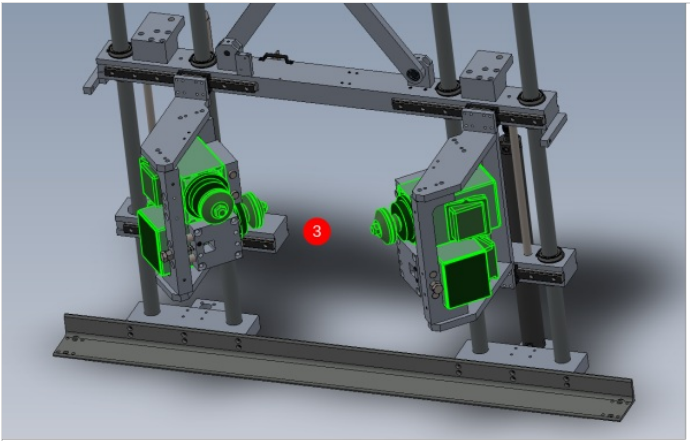
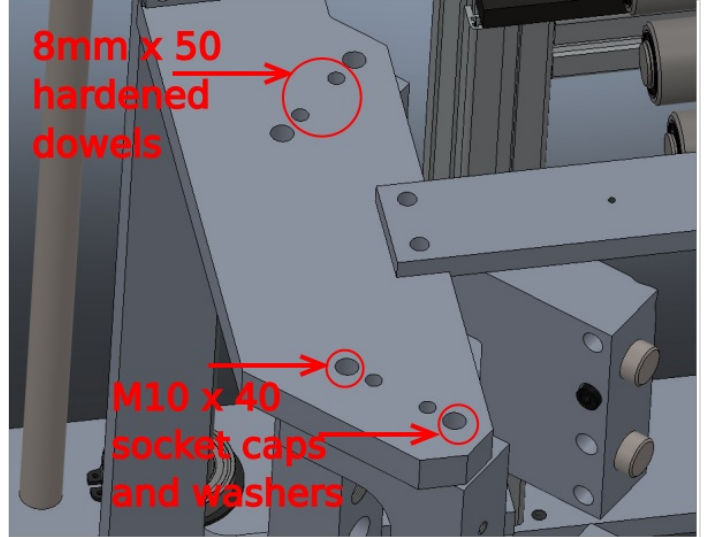
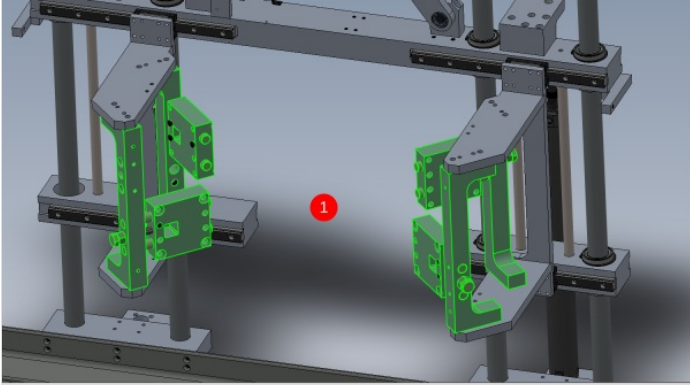
Step 12 - Attach motor assemblies Same orientation for R-L and L-R

1 Attach 4 off pre build motor supports. Orientate as shown

2 Fix using 4 off M10 x 40 socket caps and A form washers, and 4 off 8mm x 50 hardened dowels per saw plate

3 Fit 4 off E0001185 Elte Saw motor as shown using 4 off M10 x 50 socket countersunk bolts per motor

4 Ensure motor is set level using engineers level on the indicated axis as shown when fitting motors



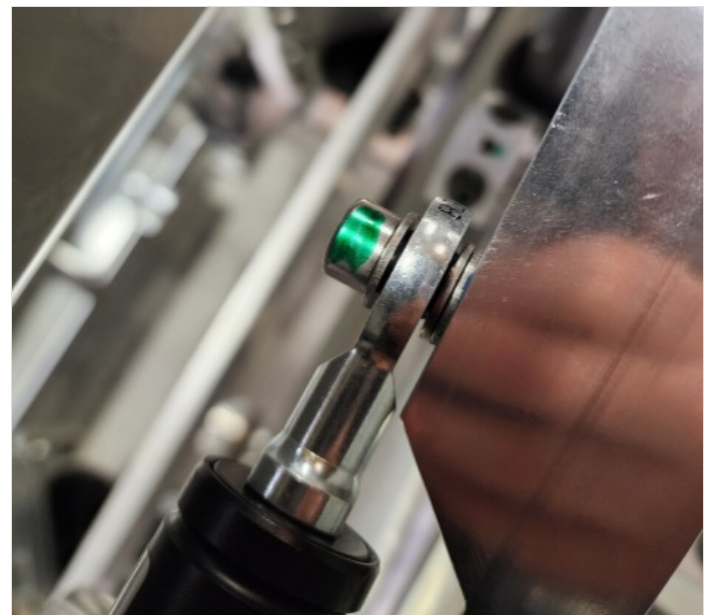
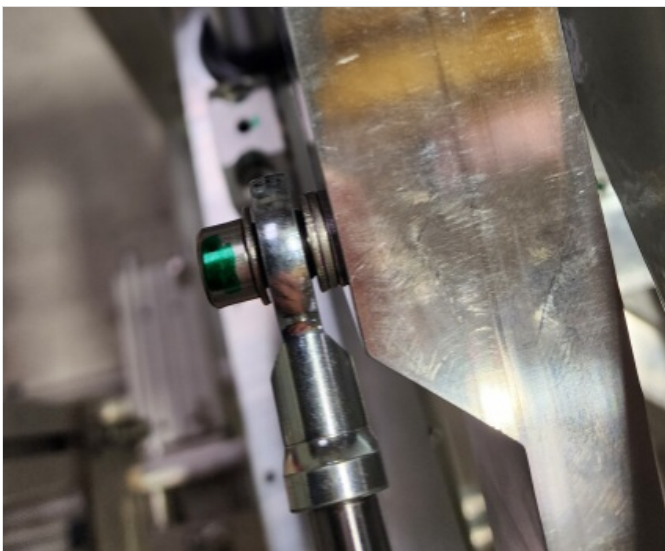
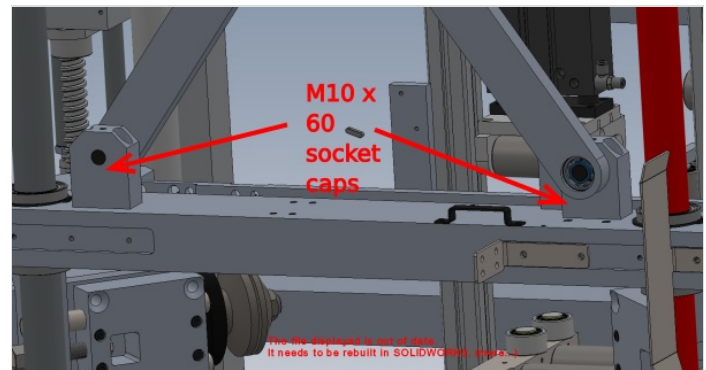
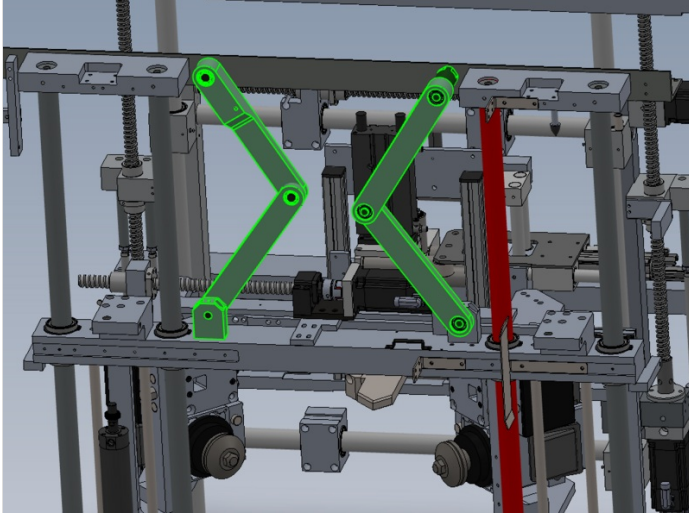
Step 13 - Attach link assembly

1 Use 2 off M12 x 20 socket caps with M12 A form washers and fix where shown

2 Fit lower brackets with 4 off M10 x 60 socket caps

3 Attach P0001142 Adjustable Damper 150mm stroke 1 off. Fix with 2 off M8 x 40 socket caps and A form washers to Suit to position damper central . Bolt will also require cutting to ensure correct spacing (See Scott)

(Pictures and info required)



Step 14 - Assemble lift cylinders

Photos required of these steps please

1 Fit 2 off P0001134 Floating Joint M18x1.5 to 2 off P0001133 Cylinder: Ø50 x 500

2 1 off cylinder fit P0001141 Fitting: SMC Flow Controller Elbow Ø8-1/4BSP to nose port , and 1 off P0001140 Pilot Check Valve: 8mm to 1/4" BSP to base port. Fit additional air fitting to check valve (P0000010?)

3 1 off cylinder fit P0000026 Silencer 1/4 BSP to nose port, and assemble the following components and fit to base port

P0000010 1/8 bsp 6mm elbow x 1

P0000050 Fitting: Silencer 1/8" BSP x 1

P0000077 Straight Adaptor 8mm - 1/8BSP x 1

P0000140 Fitting: Quick Exhaust Valve 1/8" x 1

P0000022 Fitting: Brass Reducing Bush 1/4 - 1/8 BSP x 1

P0000023 Fitting: Hex Nipple 1/8 BSP x 1





Step 15 - Attach Lift cylinder Reed switches

Attach 2 off P00001144 mounting band, 2 off P0001041 reed switch to cylinder with flow regulation fitted

Photos required please

Photo
Required

Step 16 - Attach cylinders

Photos required

1 Attach 2 off D0015168B Balance Cylinder Bracket x 2 as shown. Fix with 8 off M8 x 30 socket caps.

2 Attach cylinders to brackets using 8 off M8 x 30 socket caps and A form washers

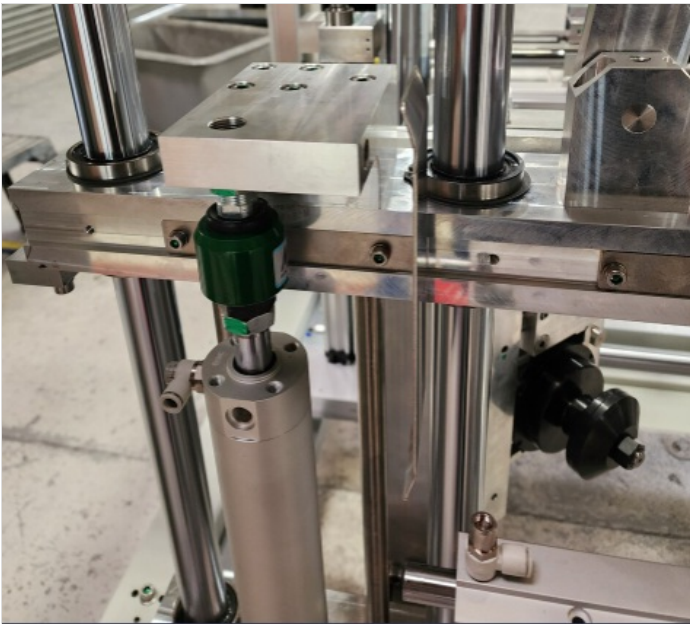
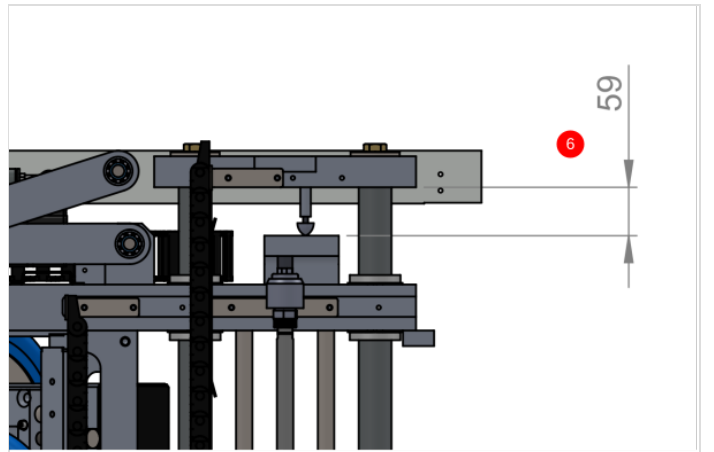
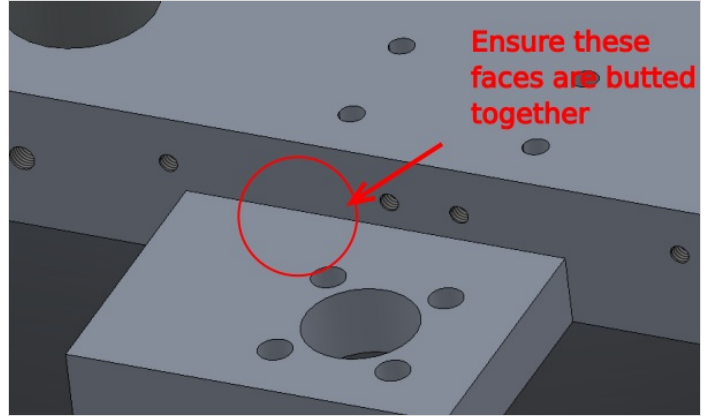
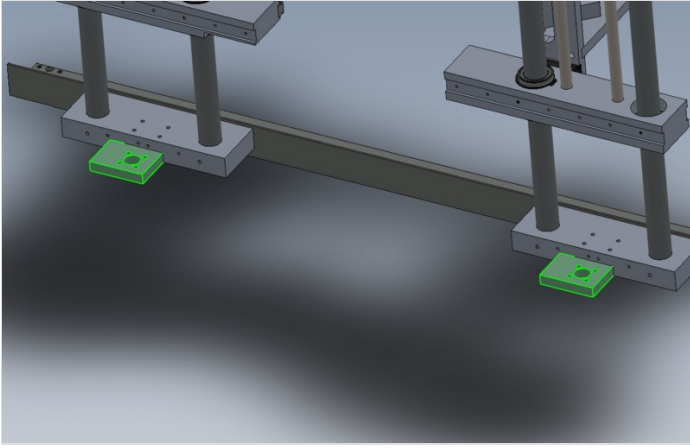
Cylinder with flow restrictors to be fitted to front of machine, cylinder with quick exhaust to be fitted to rear of machine.

3 Use P0000401 to connect to cylinder check valve and purge to disable check lock and allow movement

4 Attach cylinders to top mounts (pictures required)

5 Connect air to cylinders to lift V notch assembly to maximum up position

6 Adjust cylinder stroke into floating knuckle and floating knuckle into mount block to achieve measurement indicated of 59mm. Set both sides to this measurement . Ensure thread is evenly distributed between both components when adjusting (photo required)



Step 17 - Add Hard Stops

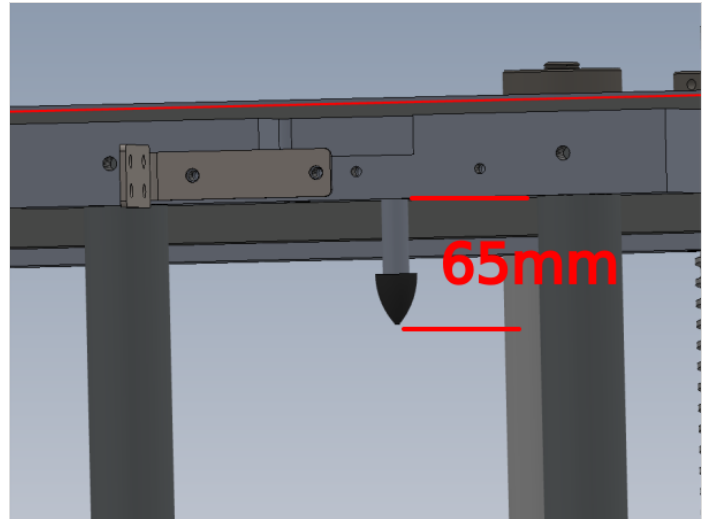
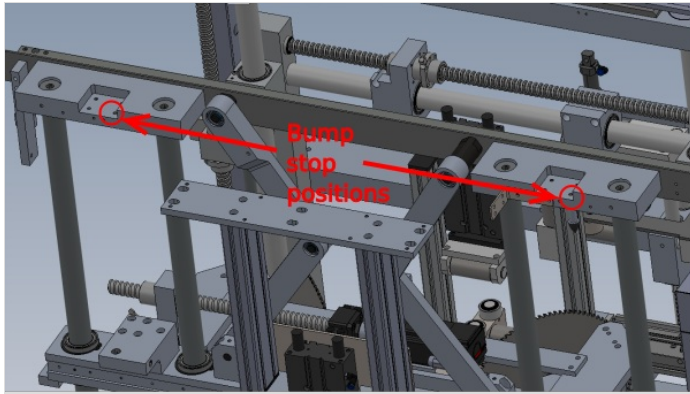
Pictures required

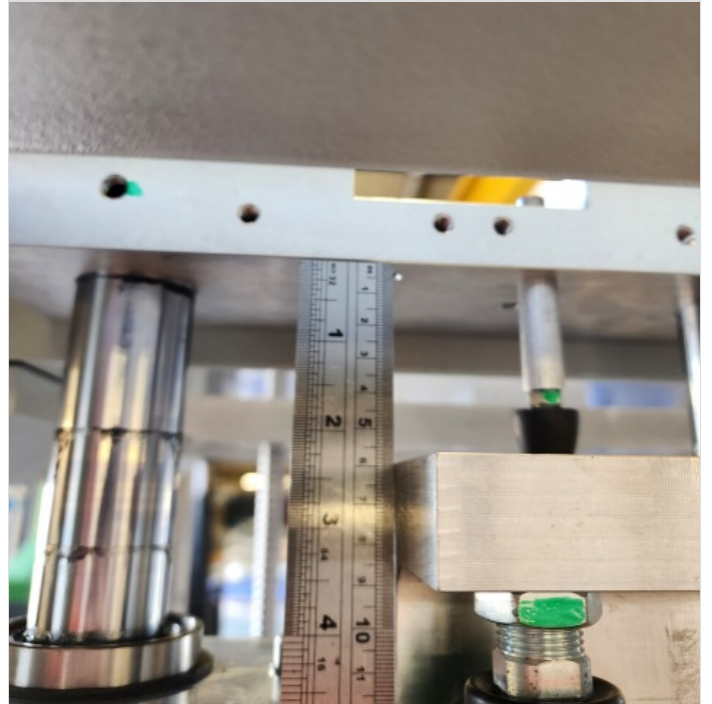
Assemble 2 off M0001087 Rubber Bump Stop M6 Ø20x24 with D0015440 Spacer: Ø12.7 x 36, M6 tap thru adding M6 nut for locking

With v notch assembly lowered, Fit assembled bump stops to positions shown

Attach with M6 x 35 socket caps and M6 heavy washer

Set to shown measurement of 65mm





Step 18 - Fit VY drive motor assembly

Attach assembly as shown

Secure using 4 off M8 x 30 socket caps With A form washers at point A

Secure Point B with 2 off M8 x 25 socket caps and A form washers

Correct alignment Check .

Alignment between leadscrew nut and mounting block are vital. To check alignment , remove fasteners holding leadscrew nut in place, and wind out nut from housing . Check in multiple positions on axis that leadscrew nut enters block correctly and is inline with the bore

