

R0015382 Top Spindle Blower Upgrade

Upgrade Blower to remove excess swarf when Top double plunge spindle is in operation

 Difficulty **Medium**

 Duration **2 hour(s)**

Contents

Introduction

Step 1 - Assemble Valve and fittings

Step 2 - Position Valve bracket and drill

Step 3 - Connect 8mm blue feed tubing

Step 4 - Trunking lids and lower swarf chute

Step 5 - Connect Y285 pilot to valve bank

Step 6 - Connect blower feed

Step 7 - Refit all guards and trunking lids

Step 8 - Route 6mm tubing through energy chain

Step 9 - Drill access hole in tool break sensor plate

Step 10 - Create blower pipe

Step 11 - Fit blower pipe

Step 12 - Finalise top tubing connections

Step 13 - Secure and position copper blower line

Step 14 - Y285 output in io.mul

Step 15 - Map Y285 to IO map

Comments

Introduction

Component List

M0001083 6mm copper tubing x 0.5 mtr

P0000160 6mm inline flow reg x 1

P0000458 pilot valve x 1

P0000075 8mm Y connector x 1

P0000046 6mm y connector x 1

P0000159 6mm Blank x 1

P0000284 6mm elbow tube connector x 1

P0000007 6mm 1/8 straight connector x 1

P0000009 6mm 1/4 elbow connector x 1

P0000097 8mm 1/4 elbow connector x 1

P000005 6mm black tubing x 7

P0000365 8mm blue tubing x 1

D0001933 Single valve bracket x 1

F0000254 M5 x 12 socket cap x 2

F0000159 M5 A form washer x 2

Step 1 - Assemble Valve and fittings

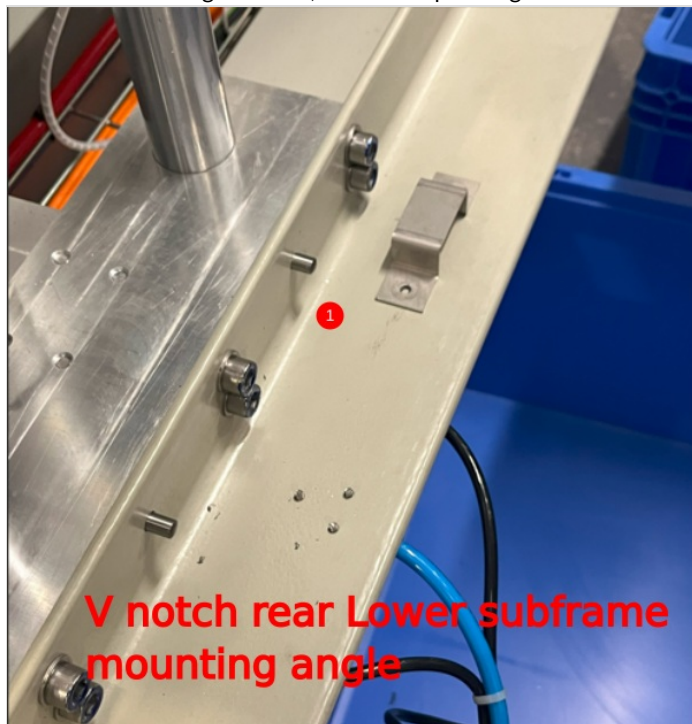
Assemble Valve and Y connector as shown



Step 2 - Position Valve bracket and drill

1 Position valve bracket approximately as shown

2 Mark holes through bracket, Drill and tap through marked holes to M5

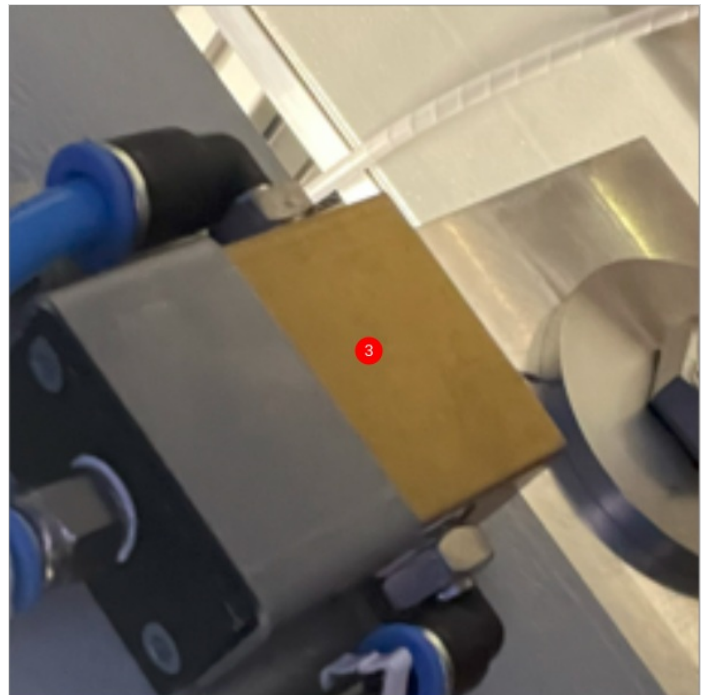


Step 3 - Connect 8mm blue feed tubing

1 Use 8mm Y connector to feed 8mm blue tubing from original 8mm blue pipe feeding V notch cut valve

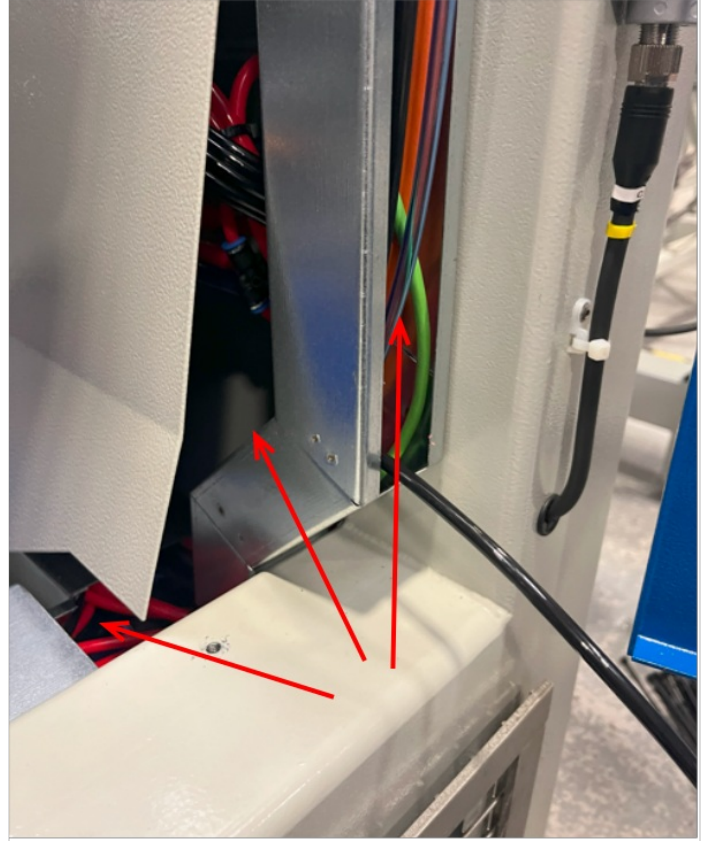
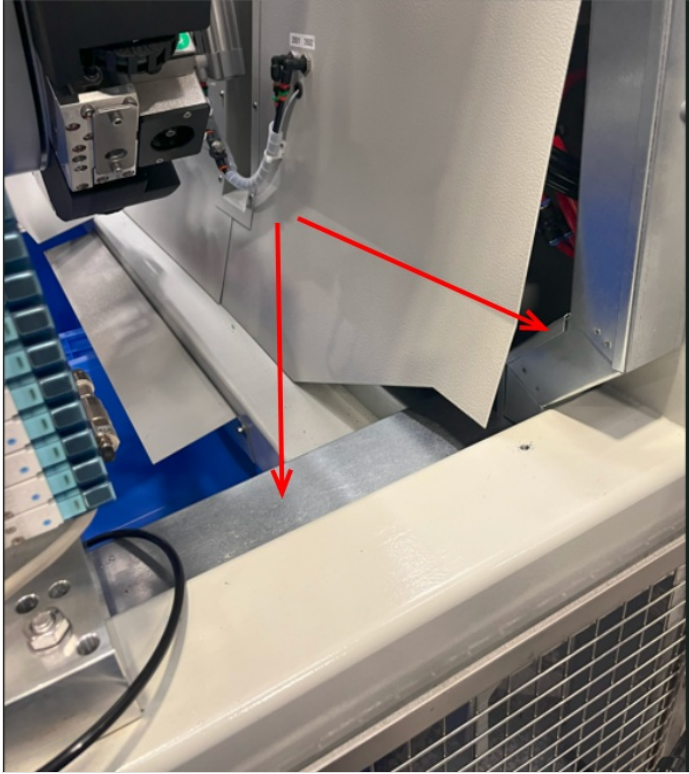
2 Connect to shown port on valve

3 Fit valve with mounting bracket to underside on angle plate, using 2 off M5 x 12 socket caps and 2 off A form washers to fix



Step 4 - Trunking lids and lower swarf chute

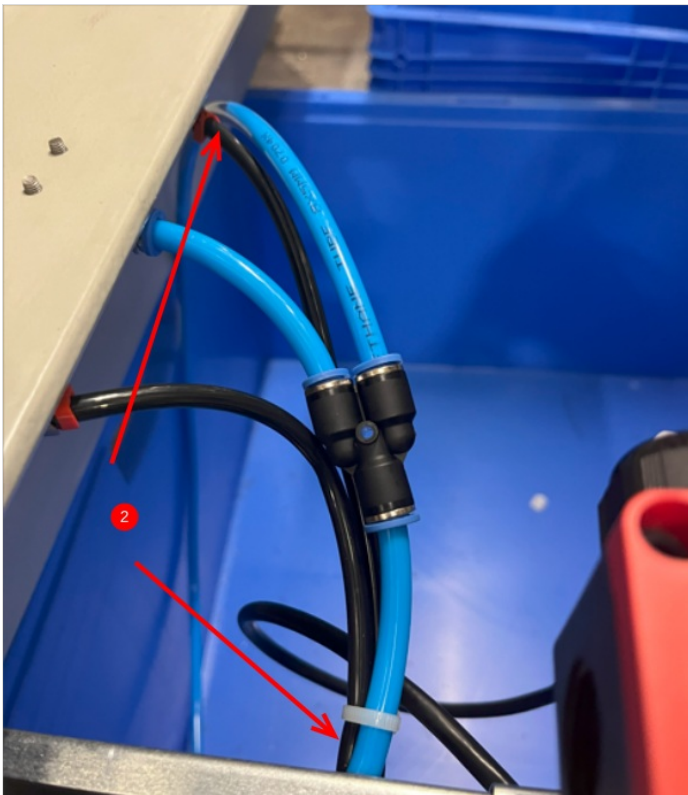
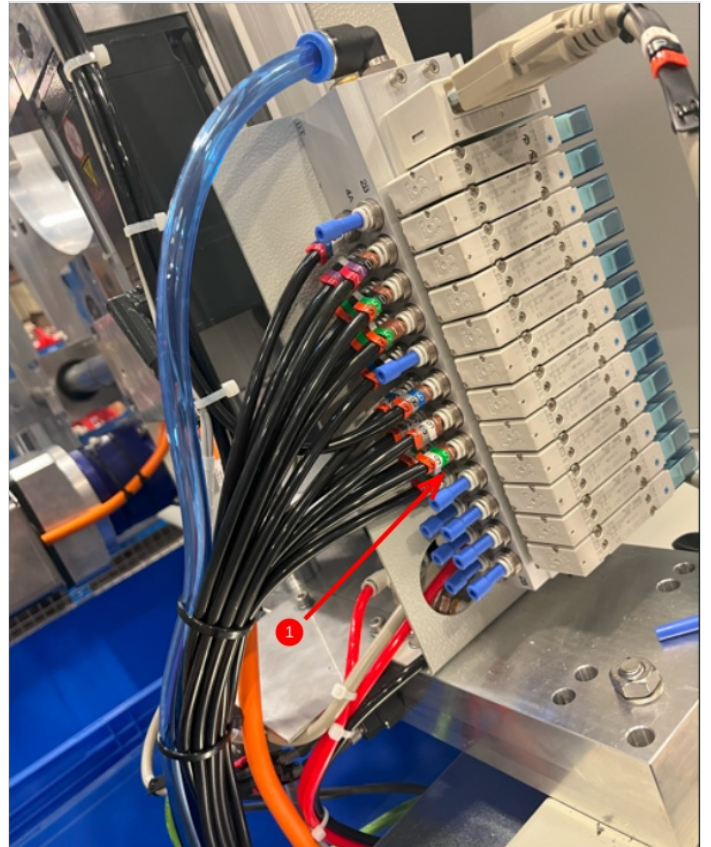
lower trunking lids and lower chute panel may require removing to install following pipework.



Step 5 - Connect Y285 pilot to valve bank

1 Remove fitted P0000159 6mm blank from indicated port on main valve bank and connect 6mm black tubing , route through trunking and exit next to pilot valve

2 Connect to port shown on pilot valve

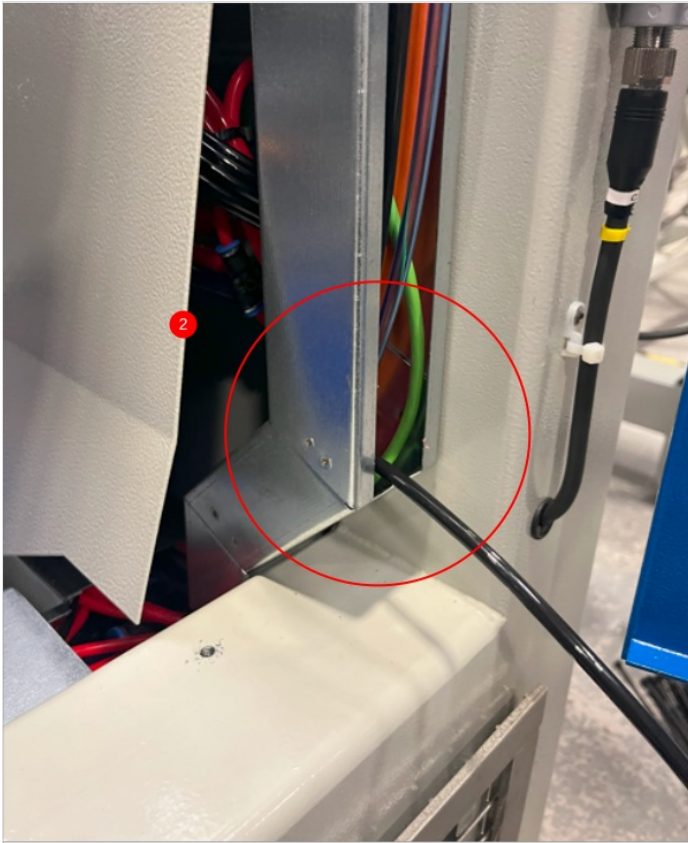
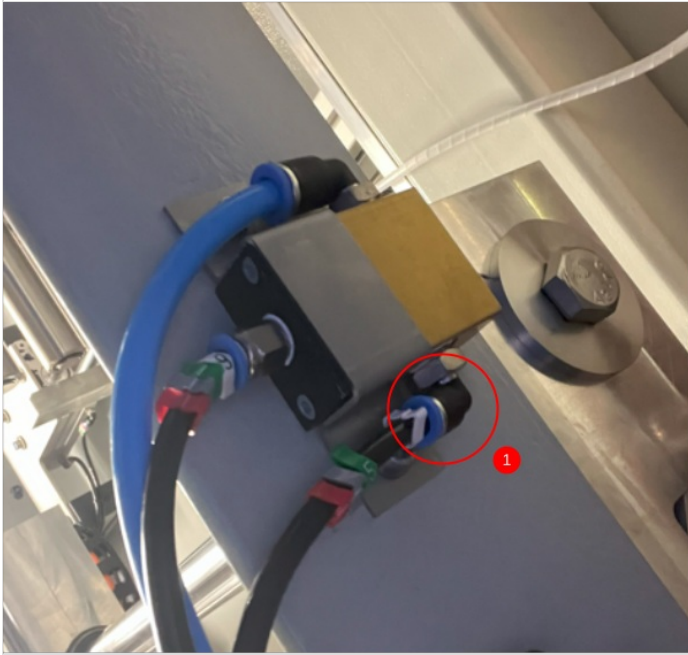


Step 6 - Connect blower feed

1 Connect 5 meter length of 6mm tubing to port shown on pilot valve and route into trunking at the same point as previous fitted tubing

2 Route pipe to point shown

3 Continue routing to trunking exit point



Step 7 - Refit all guards and trunking lids

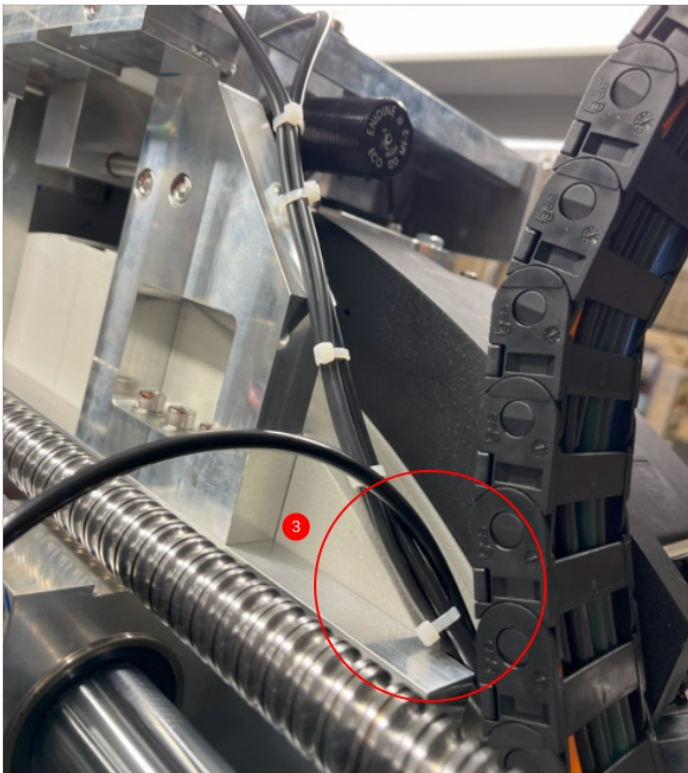
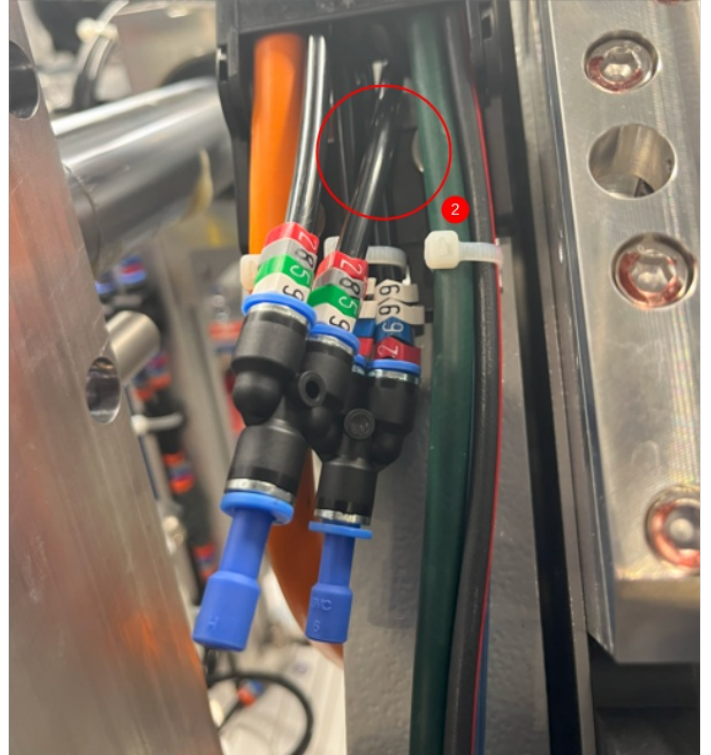
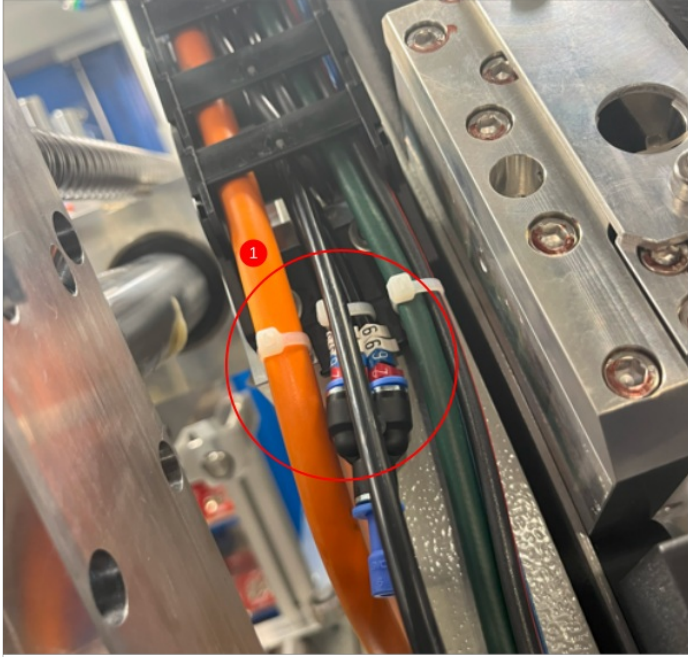
Refit all trunking lids and swarf chutes , and internal connections are now complete

Step 8 - Route 6mm tubing through energy chain

1 Route 6mm tubing through Y axis energy chain as shown

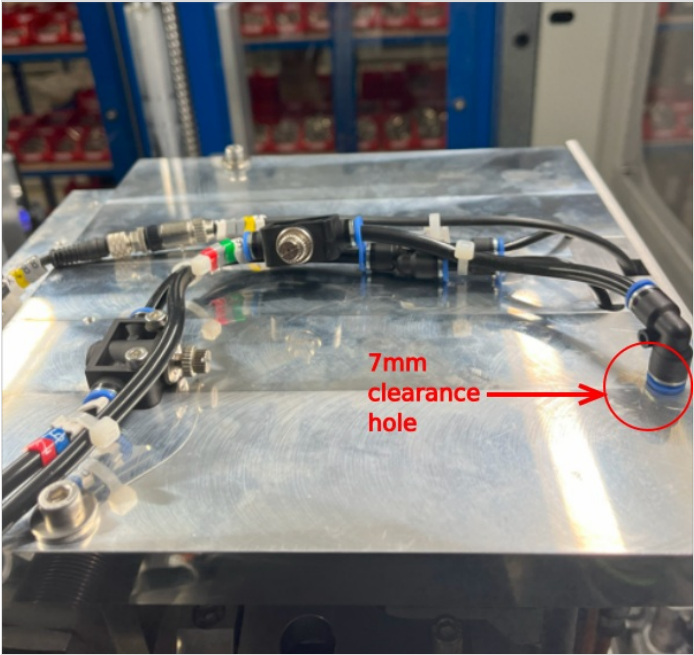
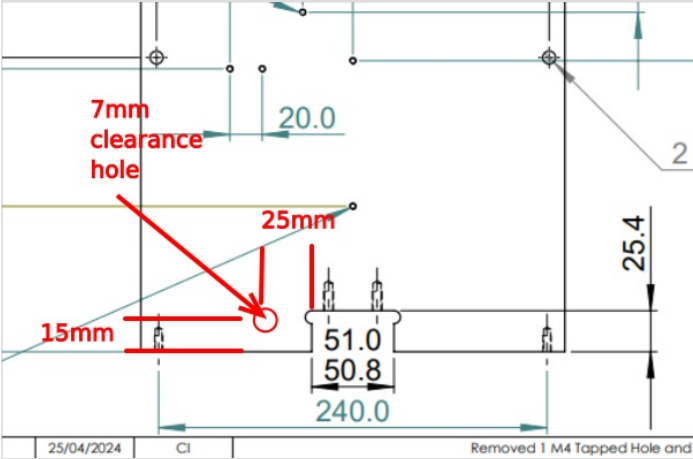
2 Fit 6mm y connector, and route additional 6mm tubing from Y connector as shown (This y connector is fitted to stop pipe crimping on energy chain full movement)

3 Tie new 6mm tubing to original loom exiting energy chain up to Tool break sensor assembly



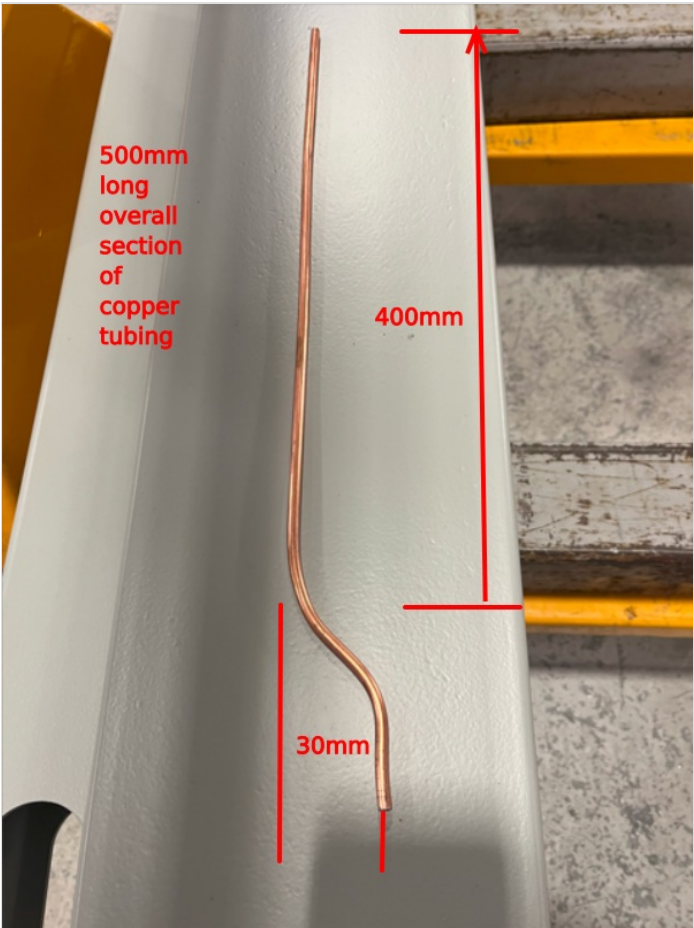
Step 9 - Drill access hole in tool break sensor plate

Drill 7mm hole in D0001962 to dimensions shown. These are approximate dimensions for ease of fitting +/- 5mm



Step 10 - Create blower pipe

Manipulate 6mm copper pipe as shown , approximately form and finalise on fitting



Step 11 - Fit blower pipe

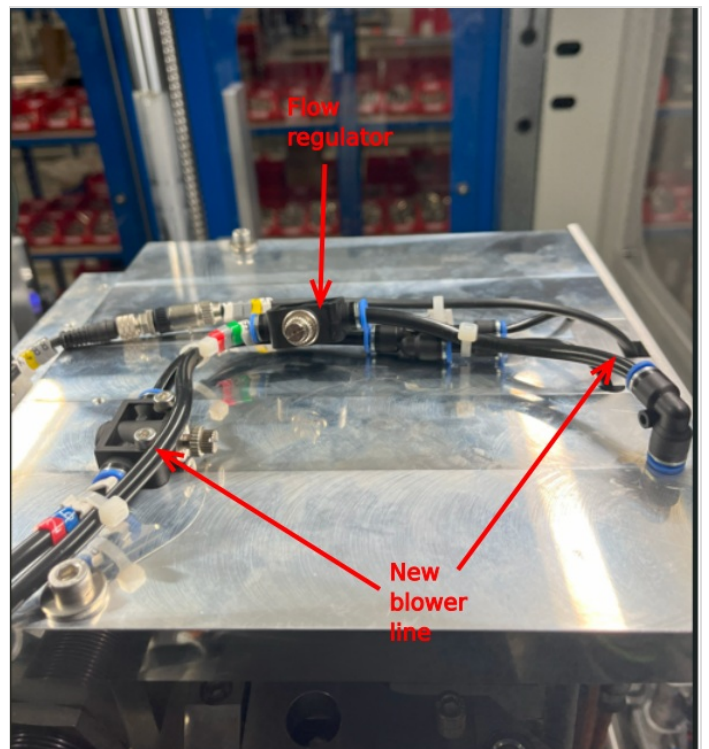
Insert copper pipe into drilled hole and hold in place with 6mm elbow tube tube fitting



Step 12 - Finalise top tubing connections

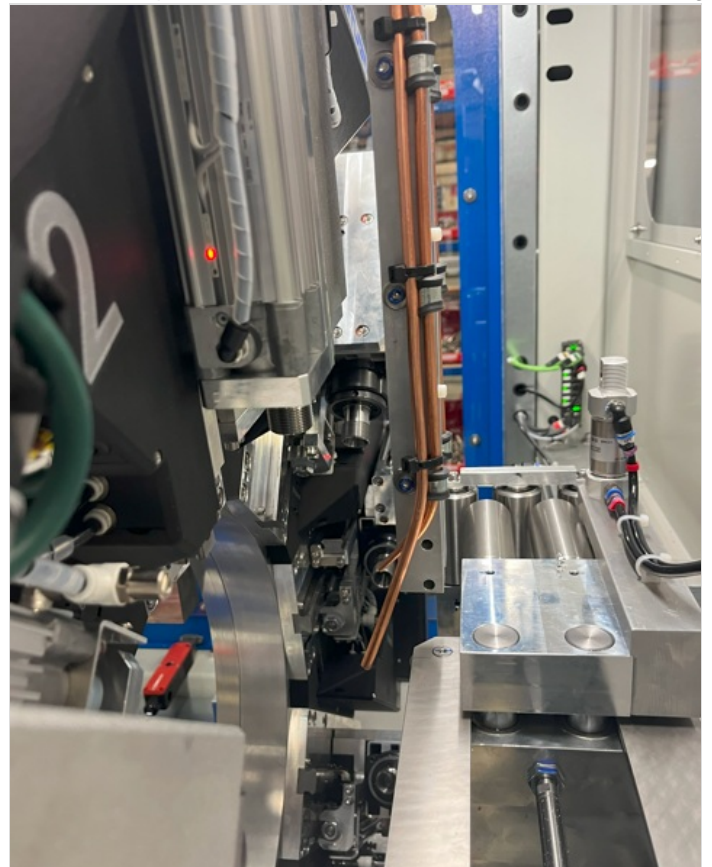
Connect top tubing section as shown, ensuring Flow restrictor is added to the line and correctly orientated to allow flow regulation when adjusted
(this can be tested once functioning)

Secure new tubing to original loom with tie wraps



Secure copper blower line to original tool break sensor blower as shown. Use Tie wraps to secure

A close-up photograph of the mechanical assembly of the electron microscope. The image shows a complex arrangement of metal components, including a large, dark, rectangular block. Several copper-colored cables are bundled together and secured with black zip ties. A white, flexible, braided cable is also visible, connected to a metal fitting. The background shows a blue structural element and a control panel with various buttons and indicators.



OuB_BlwSpin,285,2,0,0,False,False,0,7,0,False,0,Y285

Map to FB02B 1622.0

Page 10 / 10