


R0015305 Install Wiring loom for Rotary loom

installation of wiring loom and captivating spindle bases

 Difficulty **Hard**

 Duration **4 hour(s)**

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Comments

Introduction

Tools Required

Standard hex key set

Ball pein hammer

6mm drift/punch

Drill driver

6mm hex drill attachment

Small g clamp 50-100m

Support block

Stubby 4mm hex key

Parts Required

D00000291 spindle plate x 8

M0000025 Ident numbers

D0007703 r stop pin

D0007990 cylinder anchor

D0007611 infill plate x 4
D0001176 Infill plate x 4

Step 1 -

All bolts to have Loctite 243 adhesive applied unless otherwise stated

All bolts to be pen marked once adhesive applied and correct tension added



Step 2 - Quality Check

Check D0000291 spindle base has M4 hole tapped all the way through the plate. Rework if not



Step 3 - Start Wiring loom installation

Wiring loom is started at position 6 as indicated by picture

1 Green and yellow Ethercat system cables route left to connection box 6

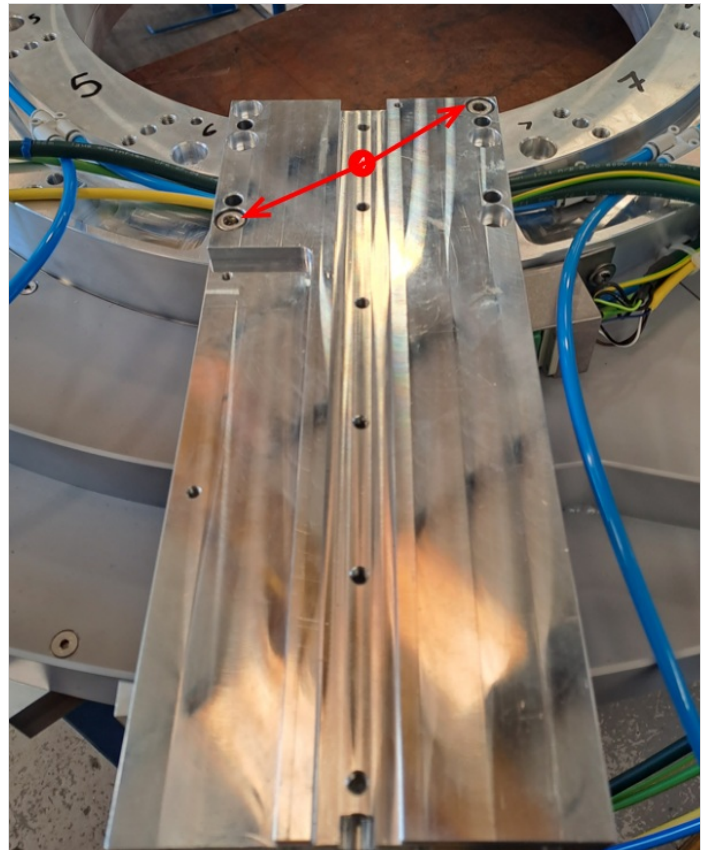
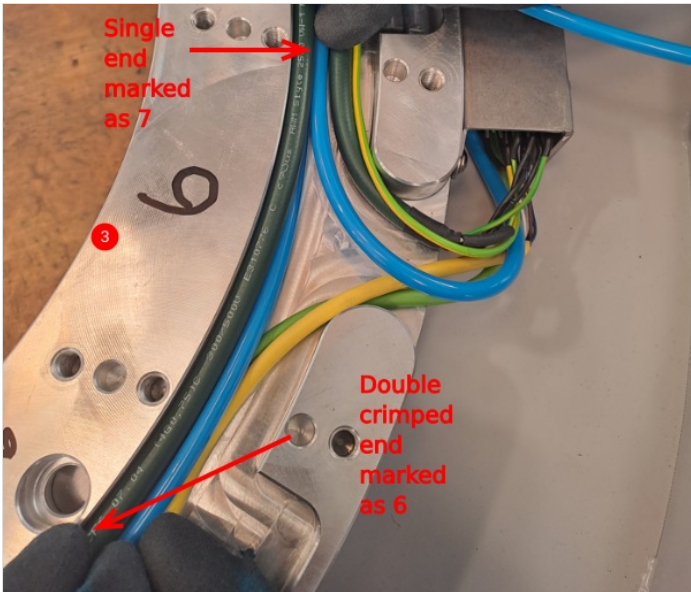
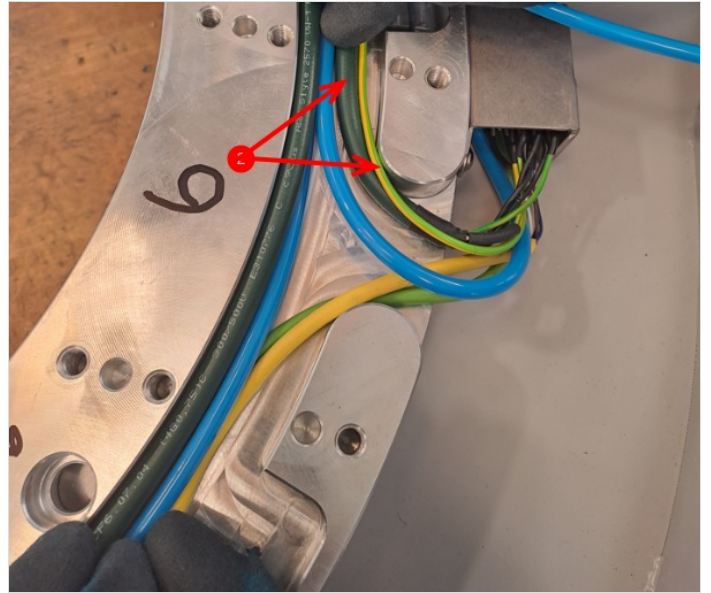
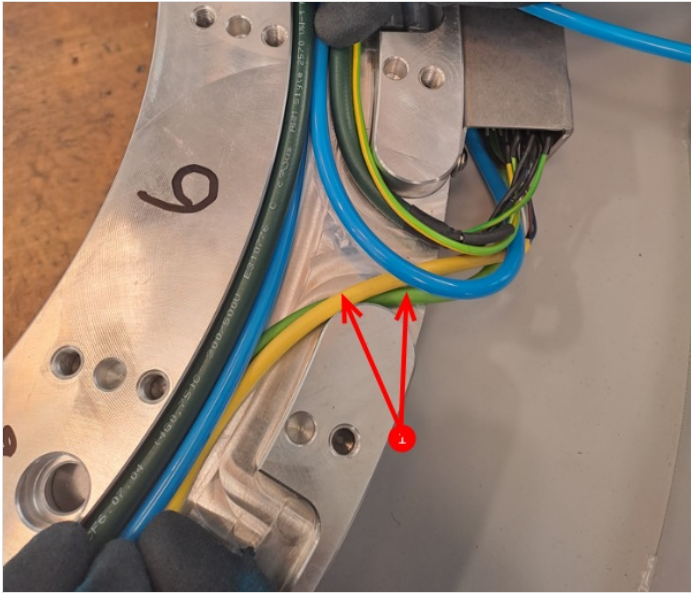
2 300 hz power cable and earth cable route to the right to connection box 7

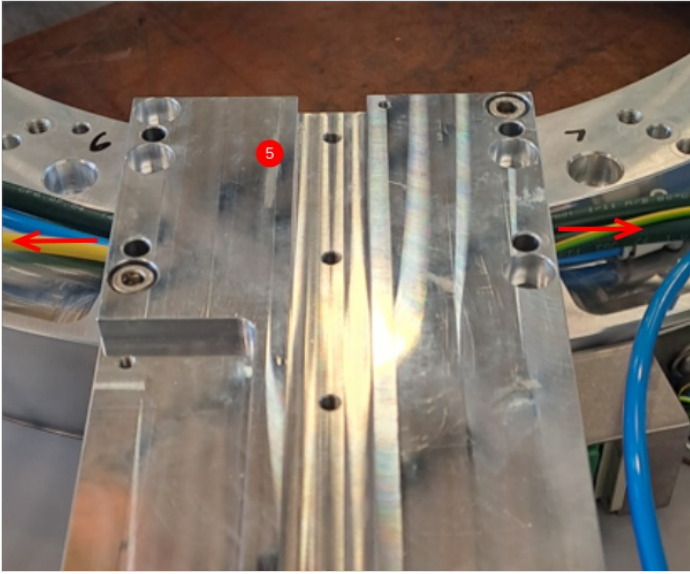
3 Pre made 300 hz wiring loom . Identify Single end of loom marked as 7 connected to double crimped end marked as 6. Run between 7 and 6 as shown in image

4 Fit plate D0000291 using 2 off m8 x 25 socket caps. Only apply light tension to the m8 socket caps with no adhesive .

5 Once plate is fitted, ensure cables under are not trapped by checking movement is possible in the direction shown

6 Fit M0000025 number ident



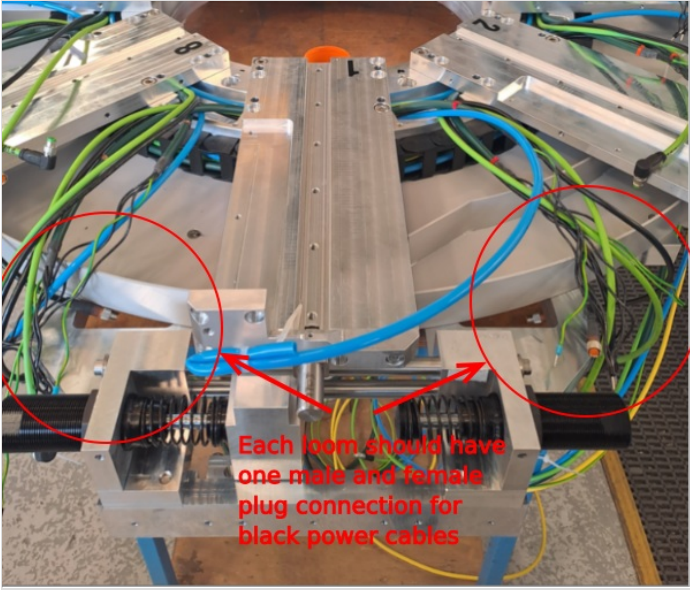


Step 4 - Quality check power routing

Pre made power cables (ethernet power) should be double checked for correct routing and orientation

Each spindle loom should contain one female and one male plug .

Check this is the case once loom is installed



Step 5 - Spindle 6 to 5 connections

From pre made cables, identify the following

24v power cable marked as 6 and 5

Green ethercat cable marked as 6 out - 5 in

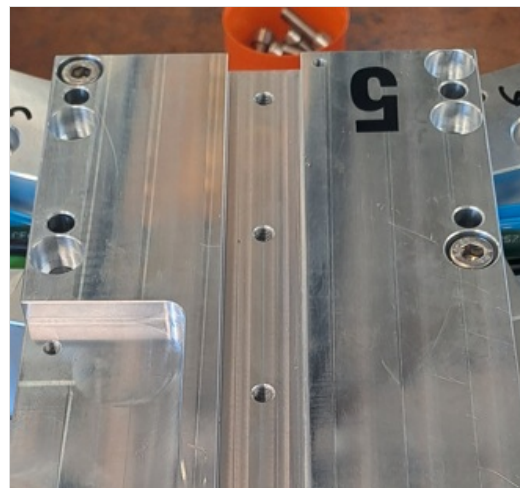
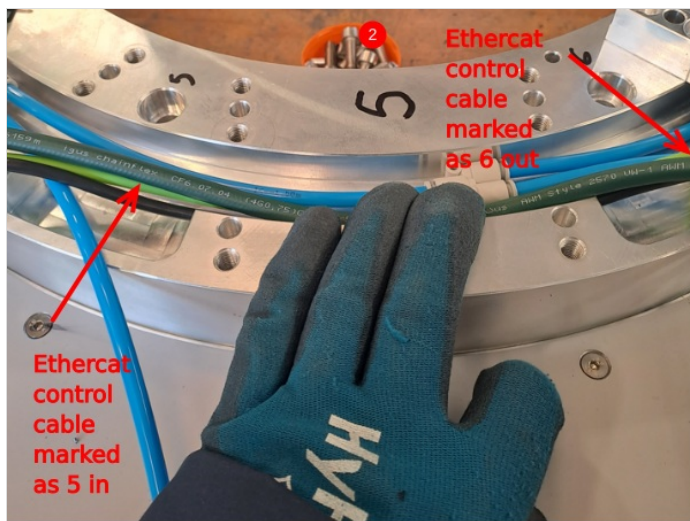
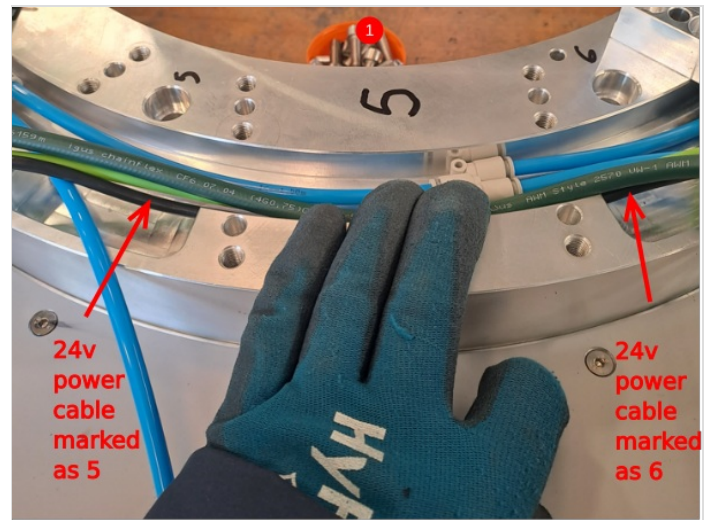
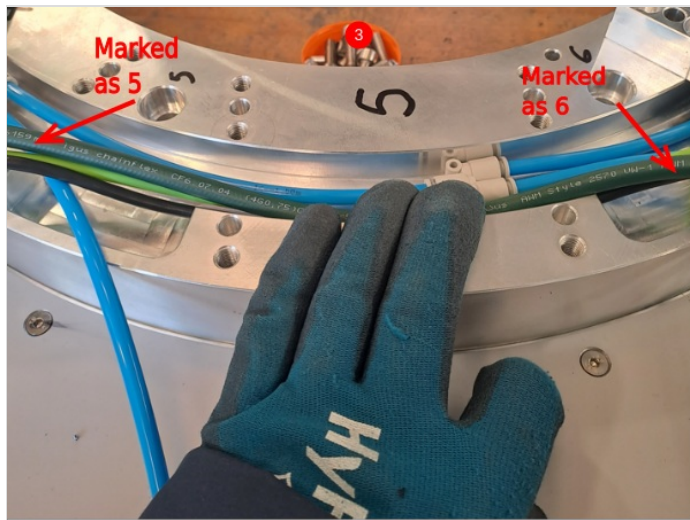
1 Install 24v power cable as shown

2 Install green ethercat cable as shown

3 Install 300 hz power cable as shown

4 Attach next D0000291 plate as step 3

5 Fit M0000025 number ident



Step 6 - Spindle 5 to 4 connections

24v power cable marked as 5 and 4

Green ethercat cable marked as 5 out - 4 in

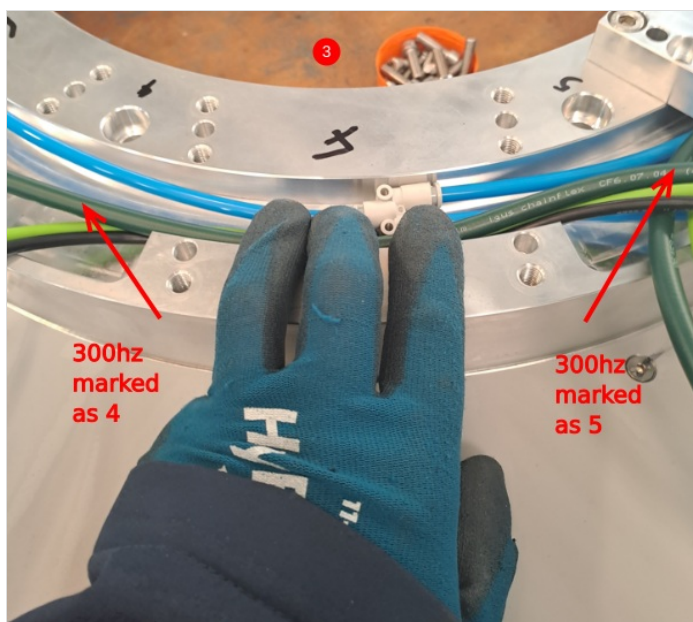
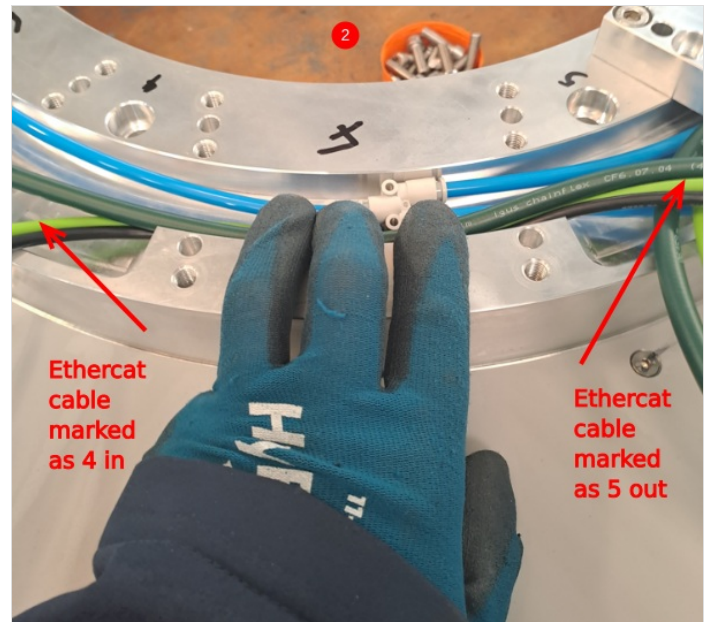
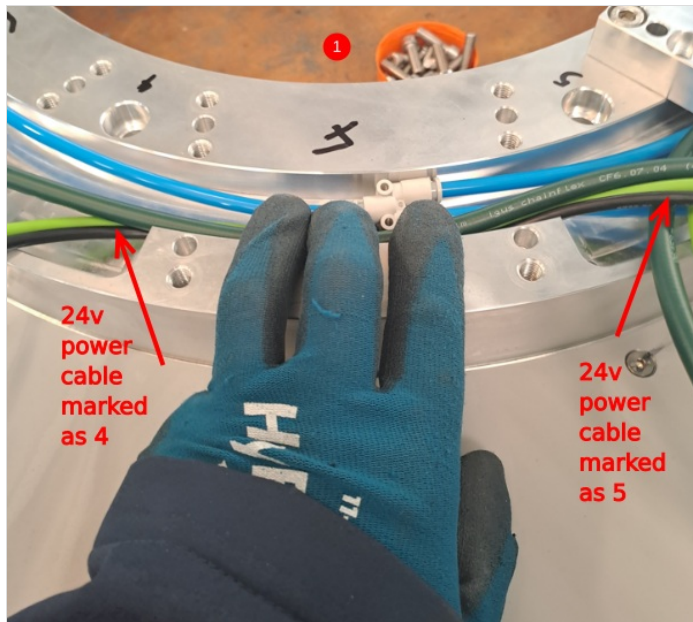
1 Install 24v power cable as shown

2 Install green ethercat cable as shown

3 Install 300 hz power cable as shown

4 Attach next D0000291 plate as step 3

5 Fit M0000025 number ident



Step 7 - Spindle 4 to 3 connections

24v power cable marked as 4 and 3

Green ethercat cable marked as 4 out - 3 in

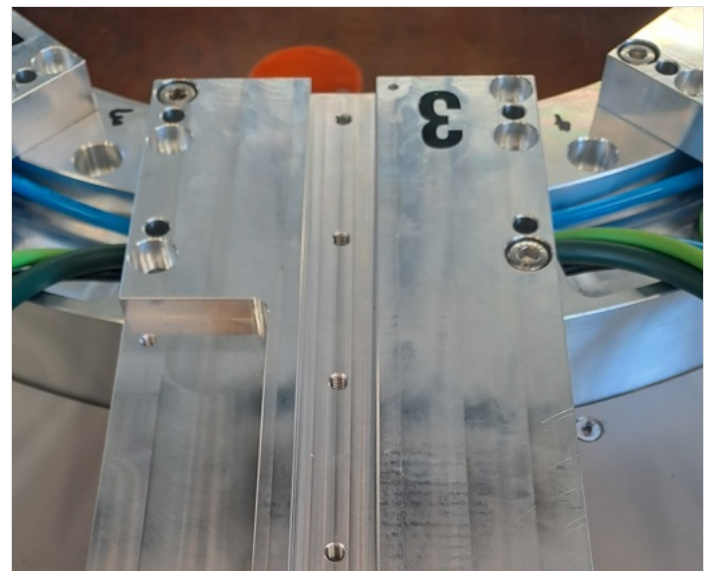
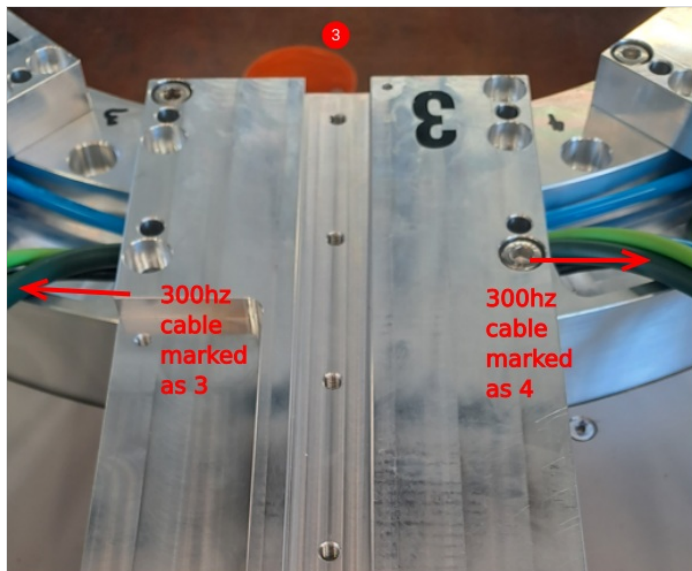
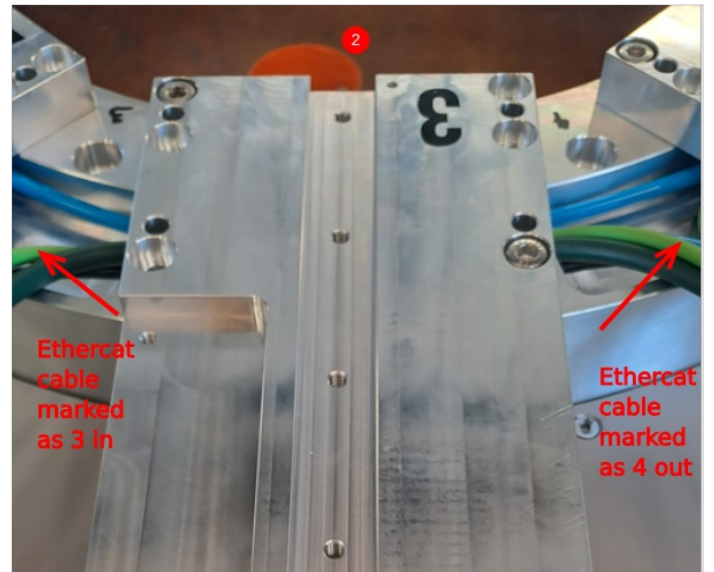
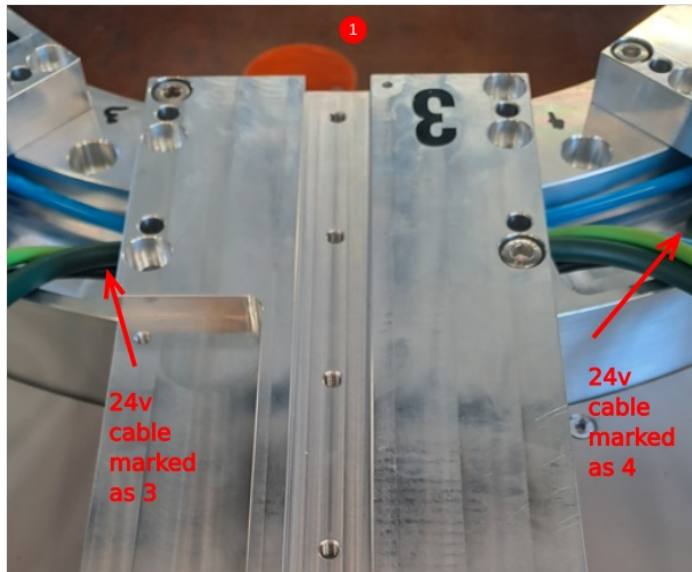
1 Install 24v power cable as shown

2 Install green ethercat cable as shown

3 Install 300 hz power cable as shown

4 Attach next D0000291 plate as step 3

5 5 Fit M0000025 number ident



Step 8 - Spindle 3 to 2 connections

24v power cable marked as 3 and 2

Green ethercat cable marked as 3 out - 2 in

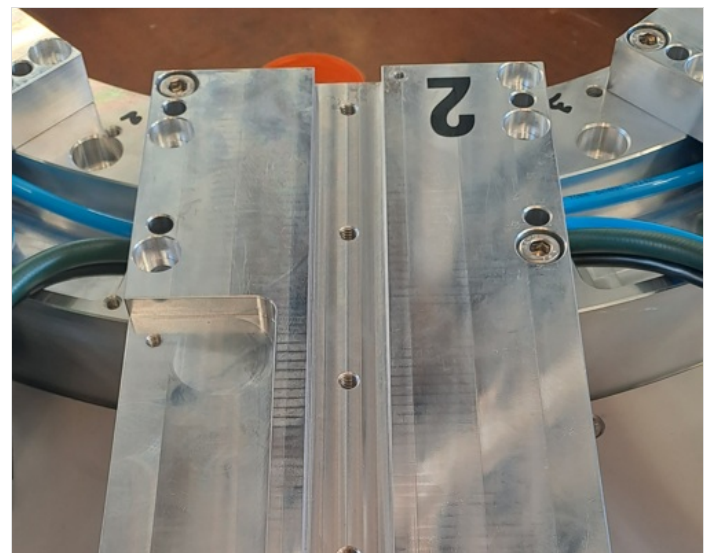
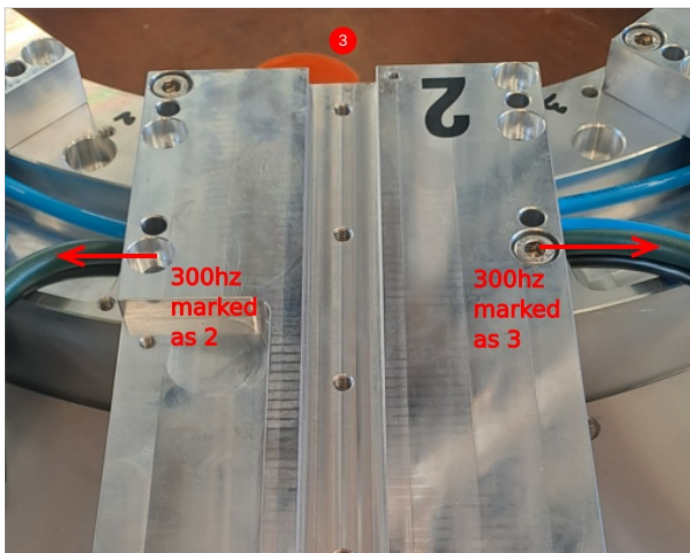
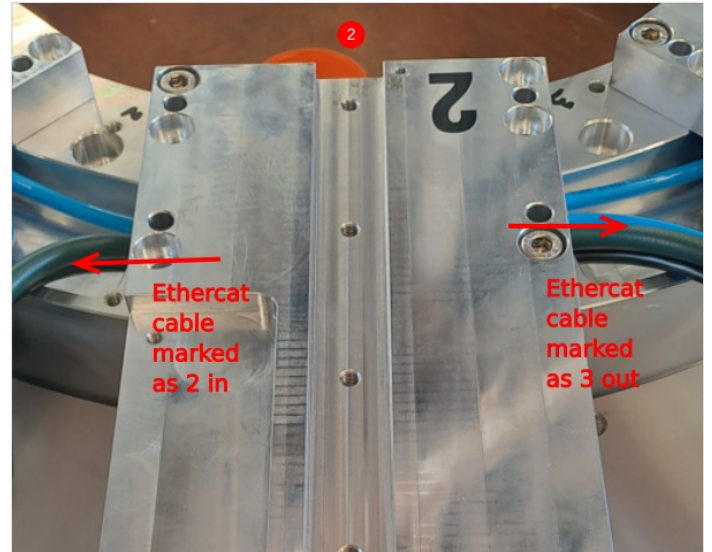
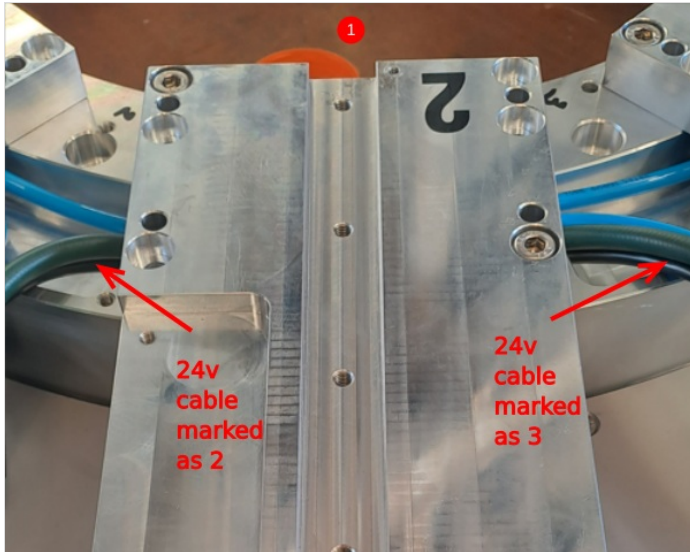
1 Install 24v power cable as shown

2 Install green ethercat cable as shown

3 Install 300 hz power cable as shown

4 Attach next D0000291 plate as step 3

5 5 Fit M0000025 number ident



Step 9 - Spindle 2 to 1 Connections

24v power cable marked as 2 and 1

Green ethercat cable marked as 2 out - 1 in

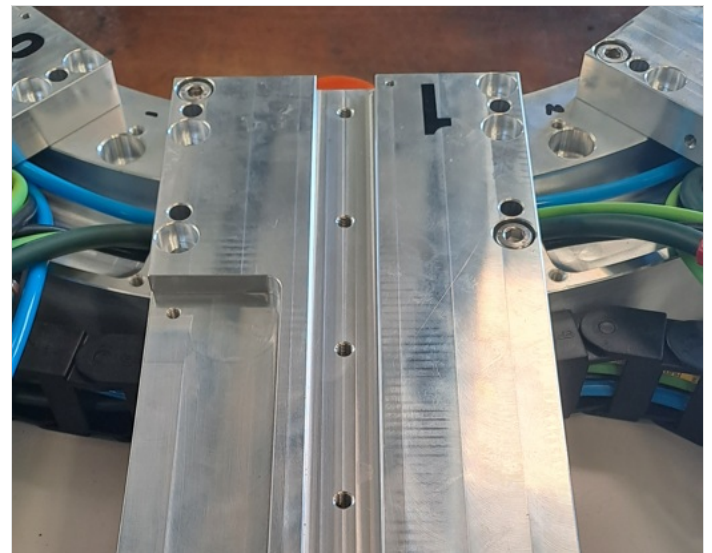
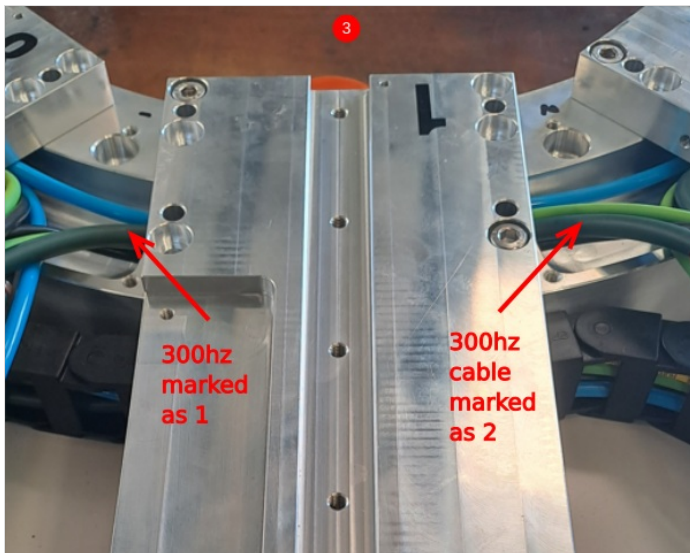
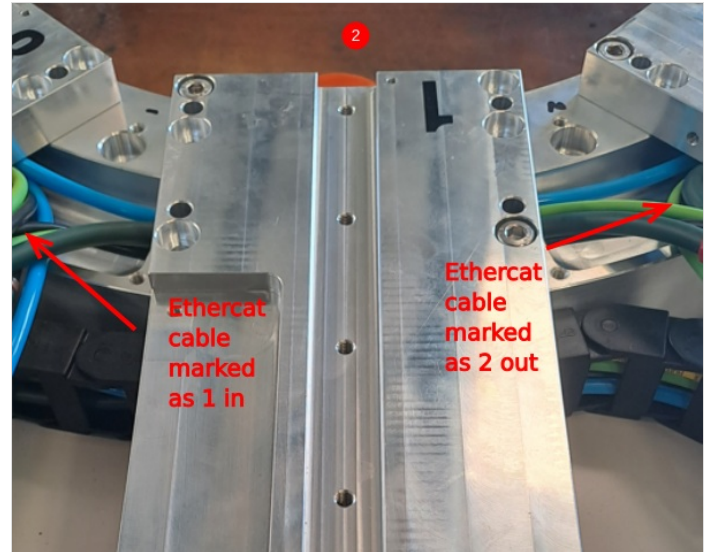
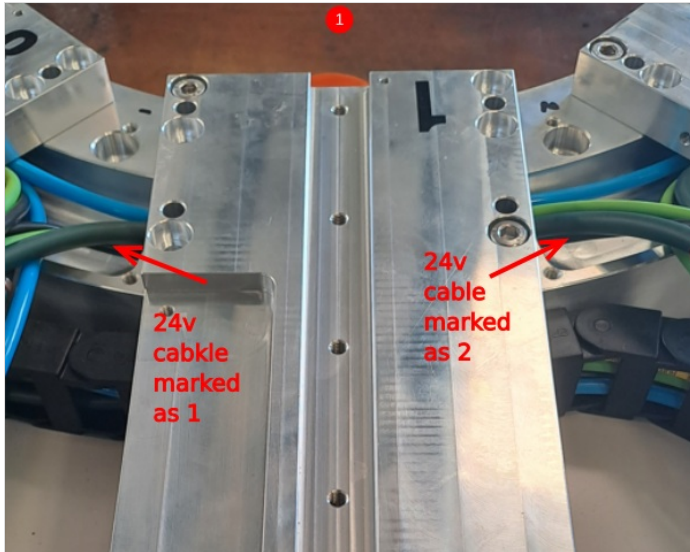
1 Install 24v power cable as shown

2 Install green ethercat cable as shown

3 Install 300 hz power cable as shown

4 Attach next D0000291 plate as step 3

5 5 Fit M0000025 number ident



Step 10 - Spindle 1 to 8 connections

24v power cable marked as 1 and 8

Green ethercat cable marked as 1 out - 8 in

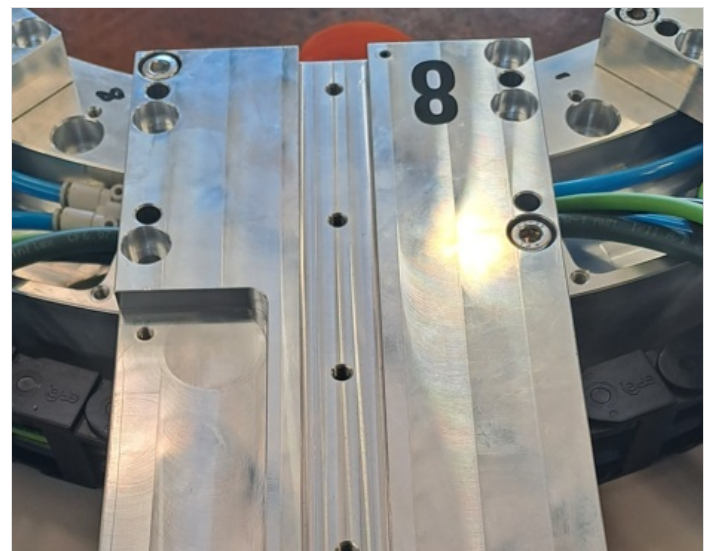
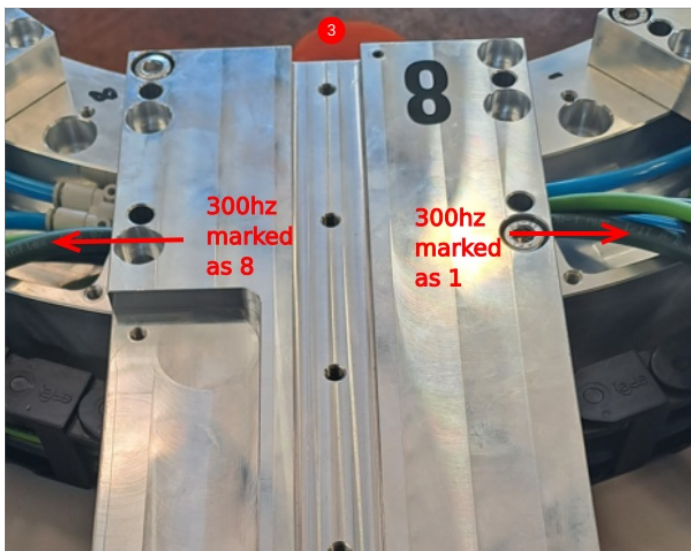
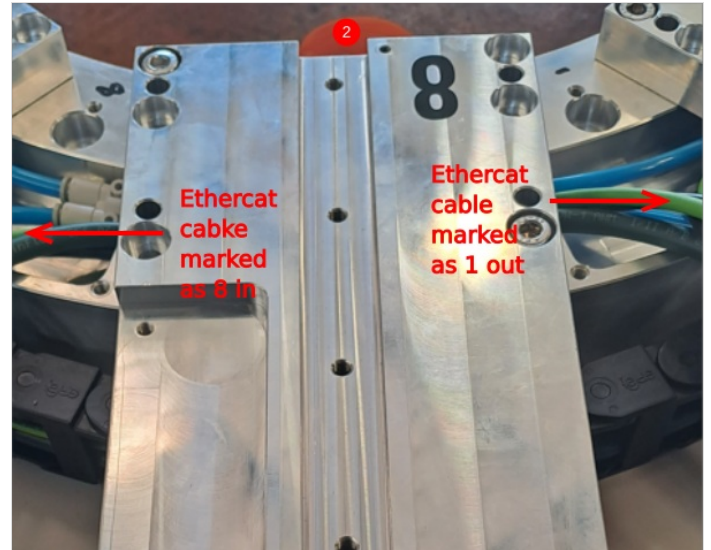
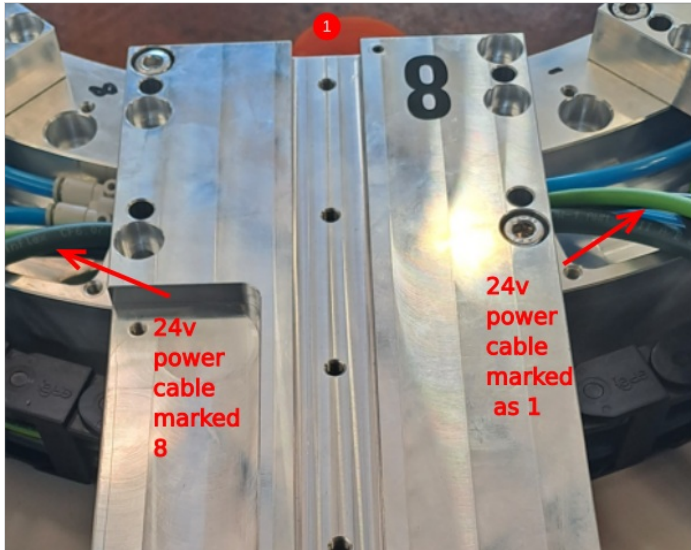
1 Install 24v power cable as shown

2 Install green ethercat cable as shown

3 Install 300 hz power cable as shown

4 Attach next D0000291 plate as step 3

5 5 Fit M0000025 number ident



Step 11 - Spindle 8 to 7 connections

24v power cable marked as 8 and 7

Green ethercat cable marked as 8 out - 7 in

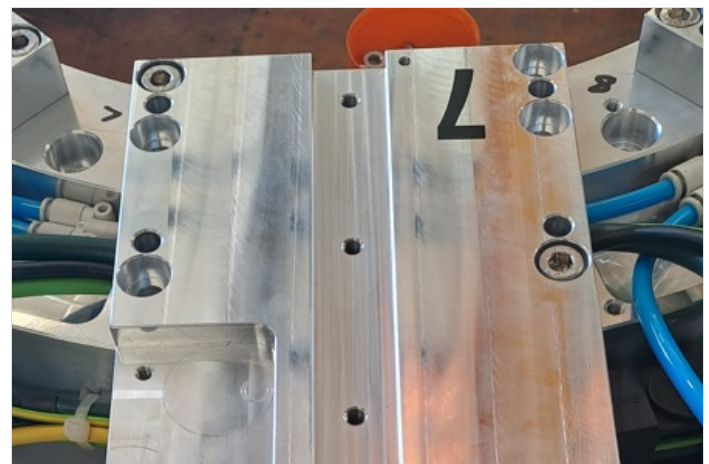
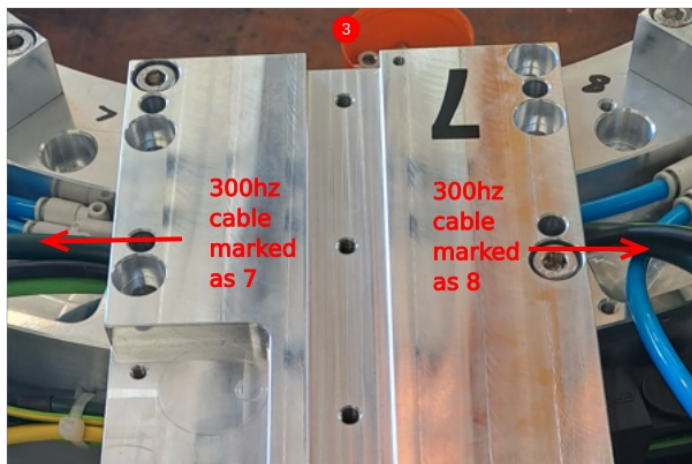
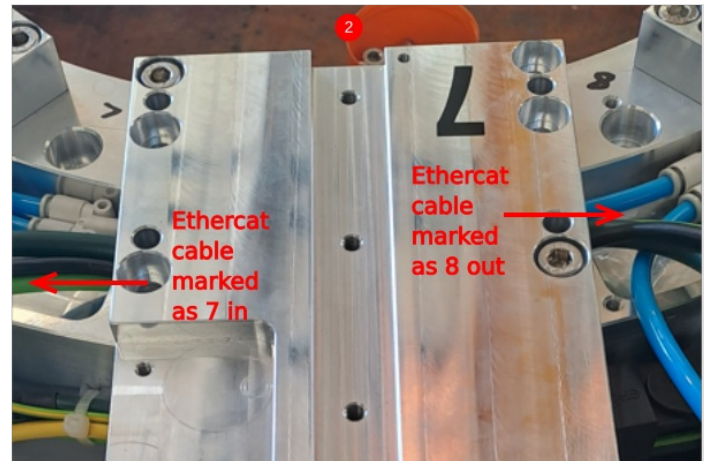
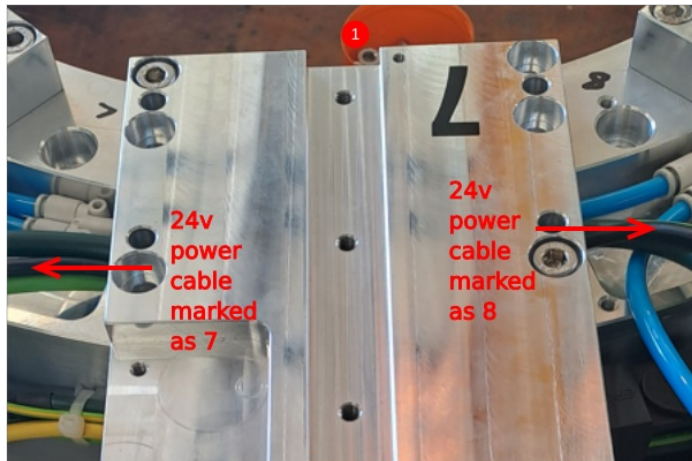
1 Install 24v power cable as shown

2 Install green ethercat cable as shown

3 Install 300 hz power cable as shown

4 Attach next D0000291 plate as step 3

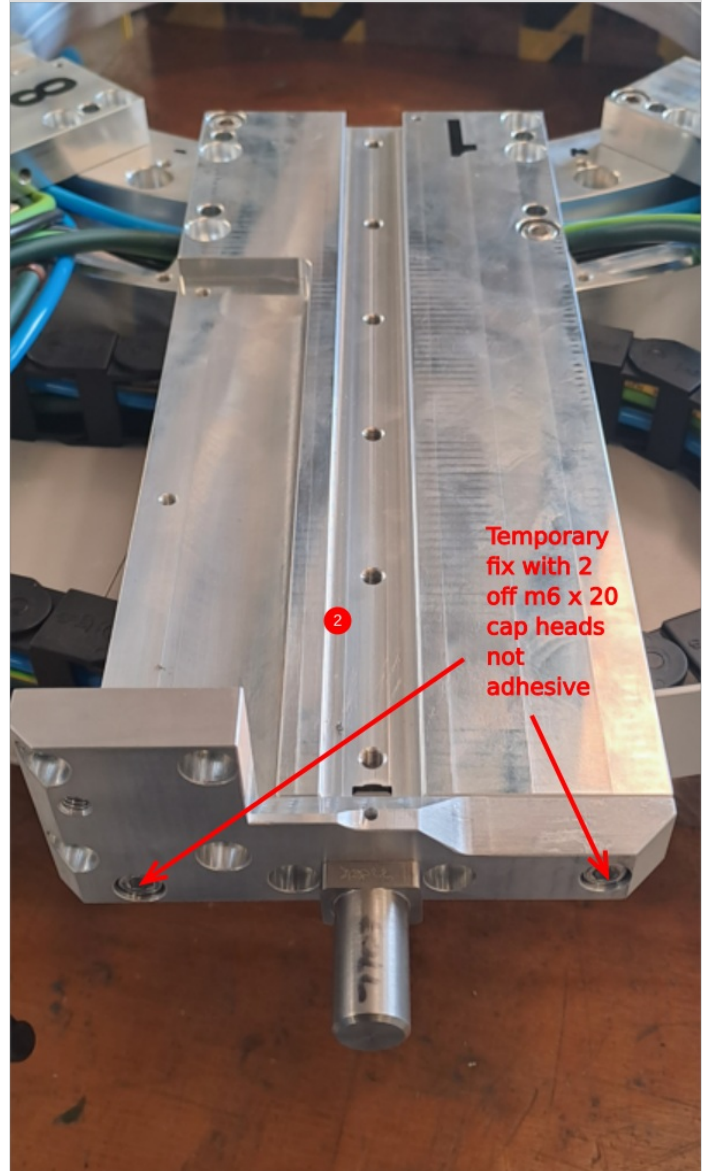
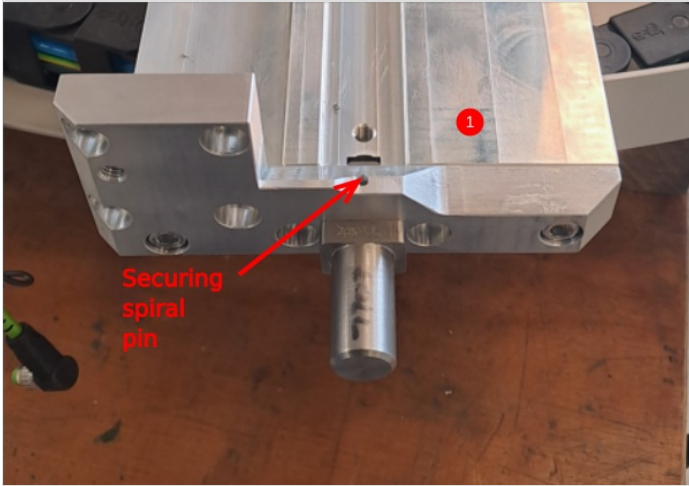
5 5 Fit M0000025 number ident



Step 12 - Fit datum stop pin assembly to spindle plate

1 Assemble D0007990 cylinder anchor and D0007703 datum pin. Use 3mm x 26mm roll pin to secure together

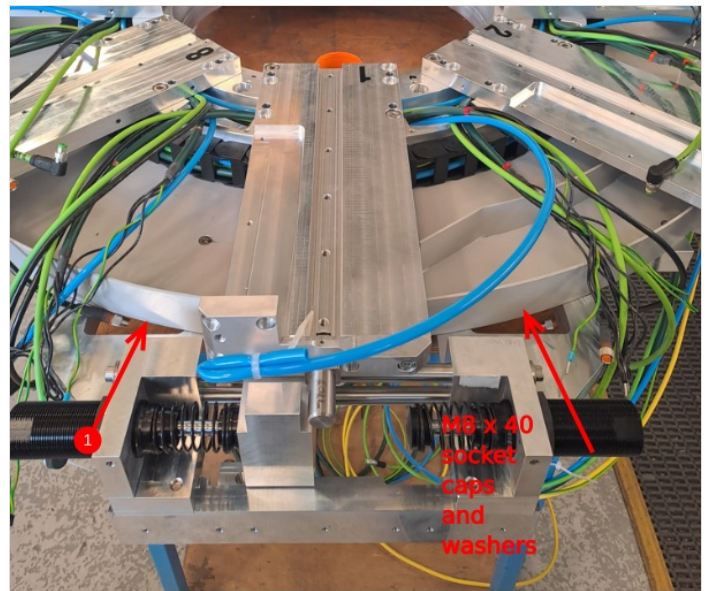
2 Temporary fix to spindle plate with m6 x 20 socket caps



Step 13 - Fit assembled R axis stop R0000713E

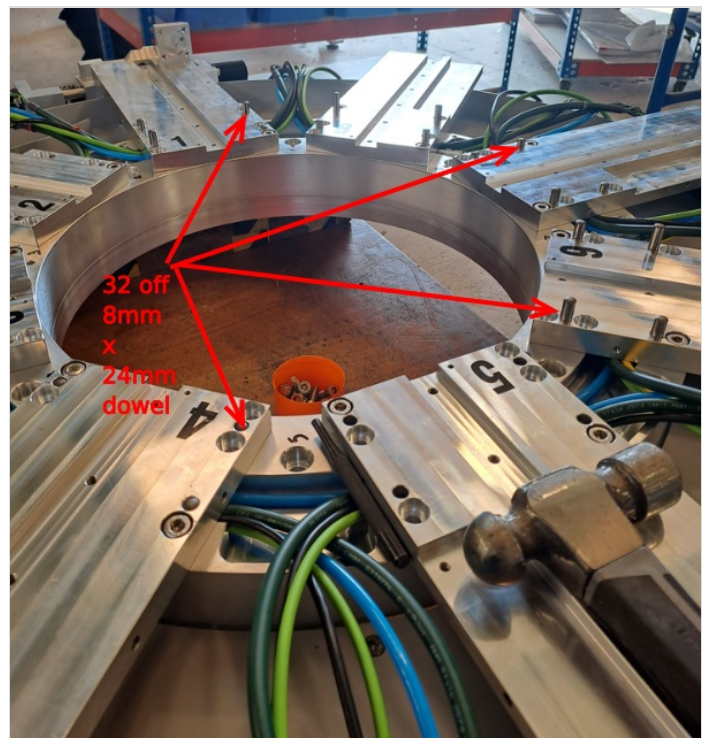
1 Fit r axis limit stop to main assembly . Use 6 off m8 x 40 socket caps with A form washers

💡 ...Ensure spindle 1 is 180 degrees away from r axis assembly when mounting. This will ensure full 360 degree of rotation will be possible



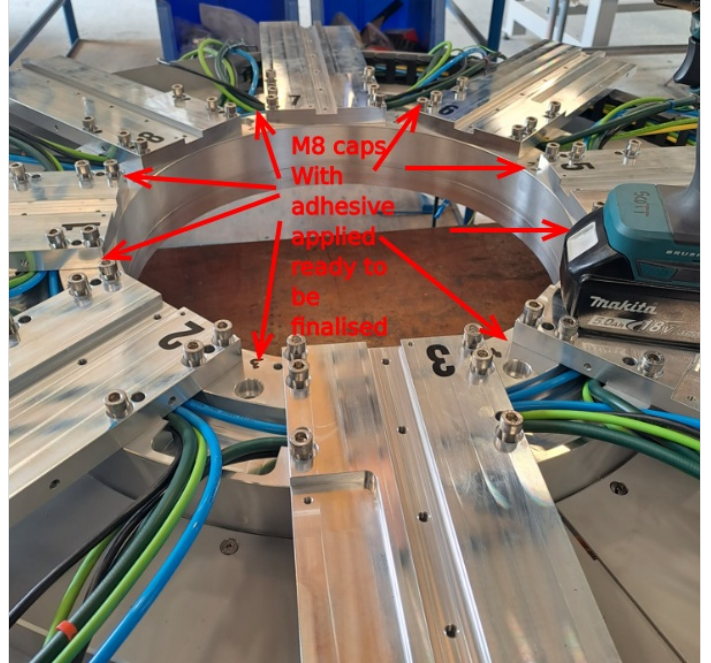
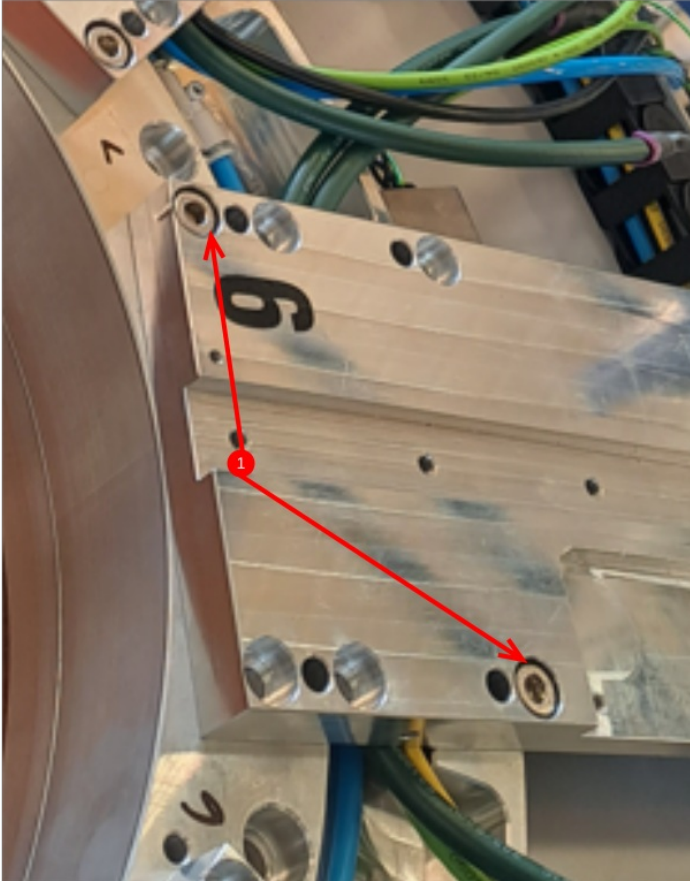
Step 14 - Dowel D0000291 plates in position

Add 4 off 8mm x 24mm dowels to each spindle by hand to start . Use and hammer and drift to drive down dowel until it bottoms out in blind hole

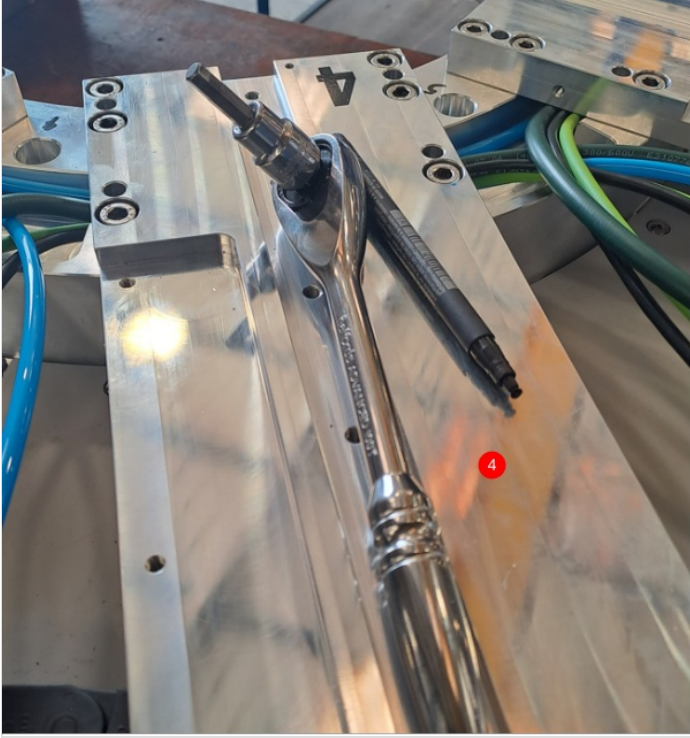


Step 15 - Add fixings

- 1 Remove 2 off m8 x 25mm cap heads from each spindle plate
- 2 Apply adhesive and lay M8 x 25 cap heads in ALL spindle holes ready for fixing
- 3 Use drill driver with 6mm hex bit to drive all cap heads in. Set clutch to 14
- 4 Methodically apply final tension to bolt by hand and mark as complete



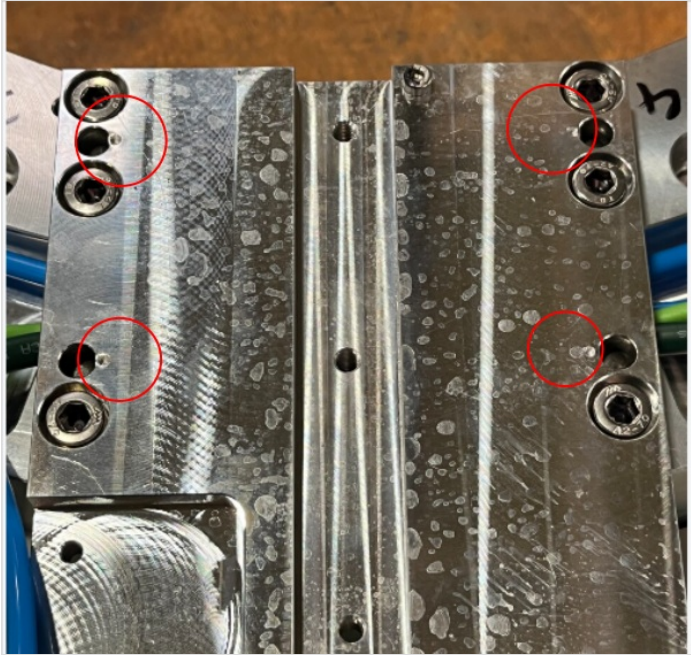




Step 16 - Finalize dowel holes

Once spindles are final fixed, preventative prep must be added to dowel holes to stop slip of dowel from hole.

Add 1 off centre dot to each dowel position to slightly swage over top of hole



Step 17 - Add Spindle infill plates

Add D0007611 infill plates to spindle plates 1,3,5 and 7

Add D0001176 infill plates to spindles 2,4,6 and 8

1 Place spindle infill plate in position threading through exiting cables

2 Place support block and small g clamp at position shown

3 Fit quick clamp to pin infill plate to ring base

4 Fit 3 off M5 x 20 socket caps With M5 A form washers to attach plate . Use a reduced length 4mm key for this

Repeat for all eight spindle plates

