

# R0015140 Spindle energy chains and looms

Installation and routing of control cables and pipes to connection boxes

 Difficulty **Medium**

 Duration **2 hour(s)**

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Comments

## Introduction

### Tools Required

Standard screw driver set  
Flush side cutters

### Parts Required

A0000344 Energy chain bracket set x 8  
A0000343 Energy chain x 4 (metres)

## Step 1 - Unless otherwise stated

Use Loctite 243 on all fasteners  
Pen mark bolts once finalised



## Step 2 - Spindle energy chain assembly


Assembly 8 off spindle energy chains with 27 links of A0000343 and 1 pair of A0000344

Assemble as image



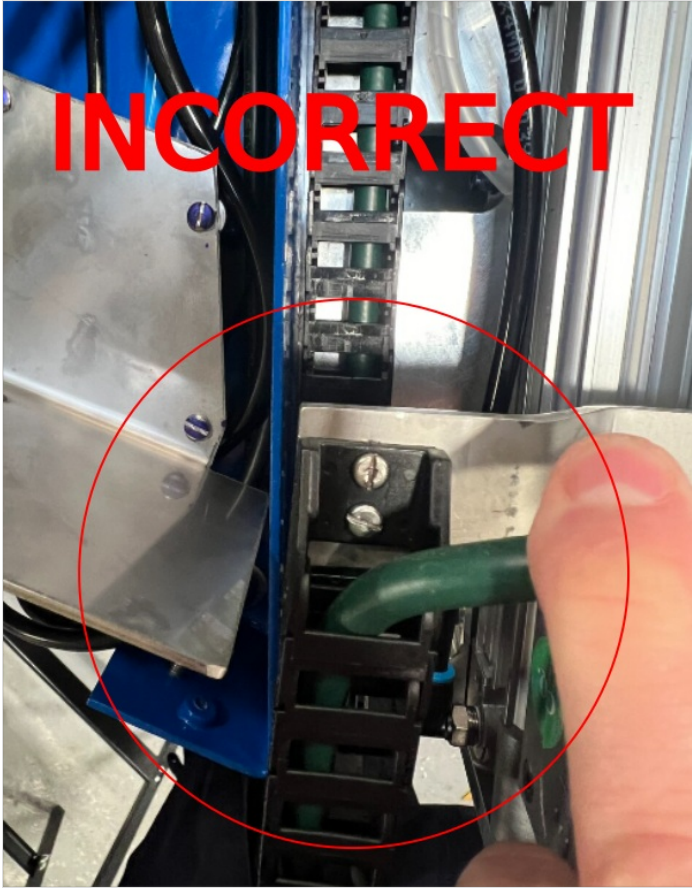
## Step 3 - Mount energy chains

1 Use 4 off m3 x 6 pan head screws and mount energy chains as shown. Ensure energy chain is mounted parallel to the cylinder

 ...When fitting energy chains, ensure they are fitted true to cylinder. Check brackets are not bent and alignment is correct (parallel)  
Photo included to show incorrect

2 Disconnect end shown ready for cabling





## Step 4 - Clearance checks

It is vital to check that energy chain and mounting bracket clear air fittings when assembly is moved.

Bracket may require adjusting to clear if interference is experienced .

Ensure all spindles are checked

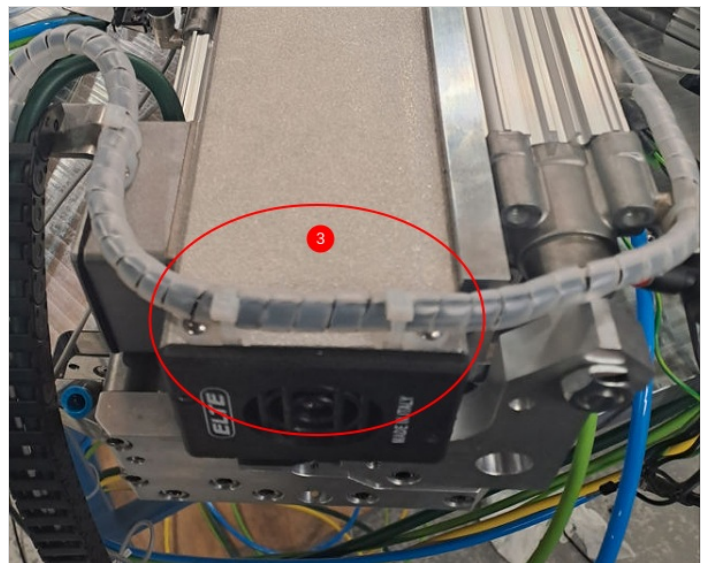
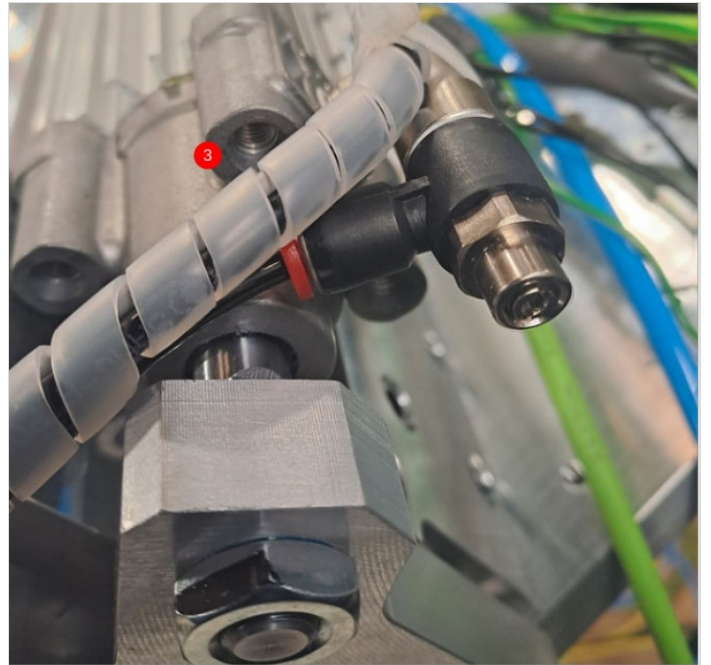
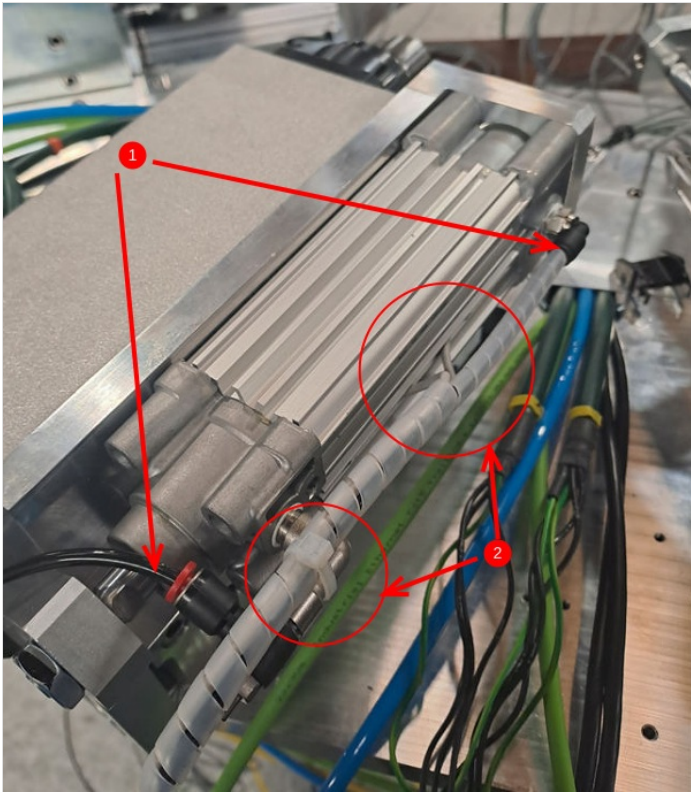


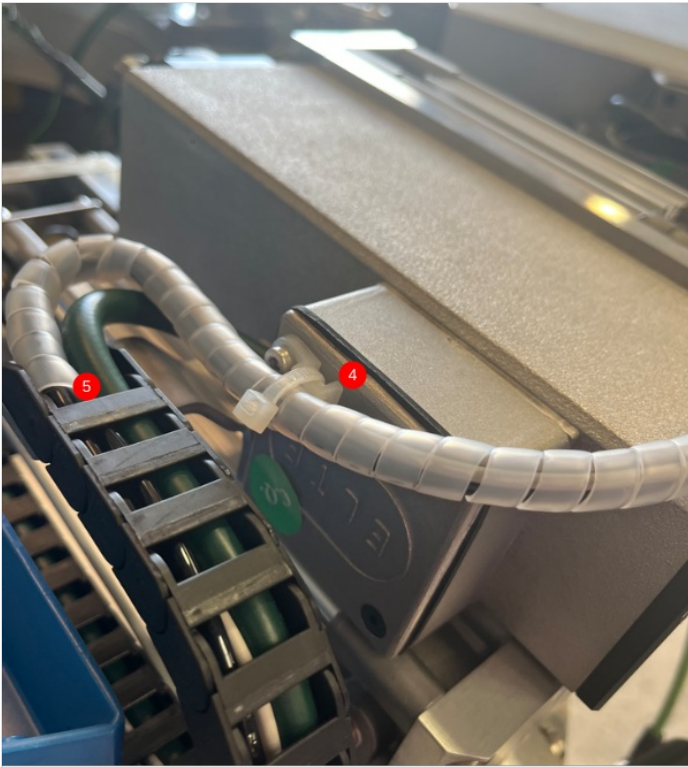
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## Step 5 - Double plunge control routing

- 1 cut 8 off lengths of 4mm black air pipe at 1250mm . Fit to all double plunge cylinder fitting
- 2 Use small cable wrap at 840mm long to start loom at cylinder end. Incorporate reed switches as passing. Add tie wrap to secure loom
- 3 Continue loom and fix to tie bases as passing
- 4 Continue loom over terminal box and secure on Tie base with M4 x ??? socket cap
- 5 Place looms as shown through energy chains
- 6 Reconnect energy chain and leave flying tails in centre of the ring

Repeat for 3 other double spindles





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### Step 6 - Single plunge cable routing

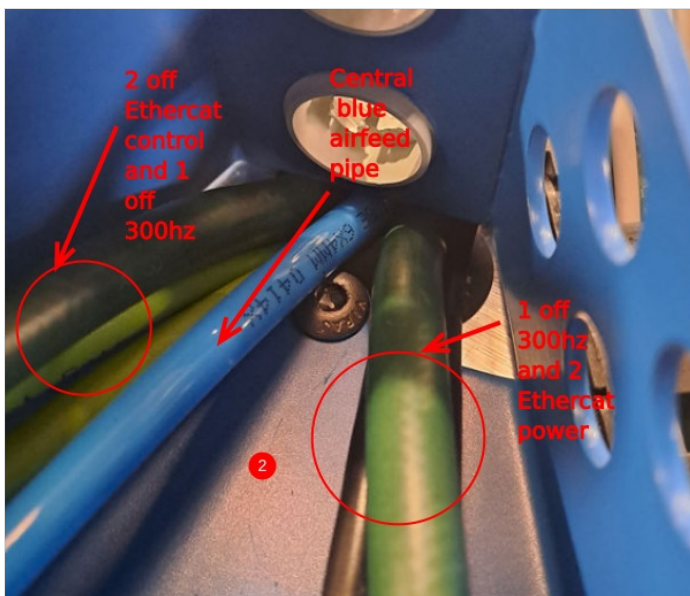
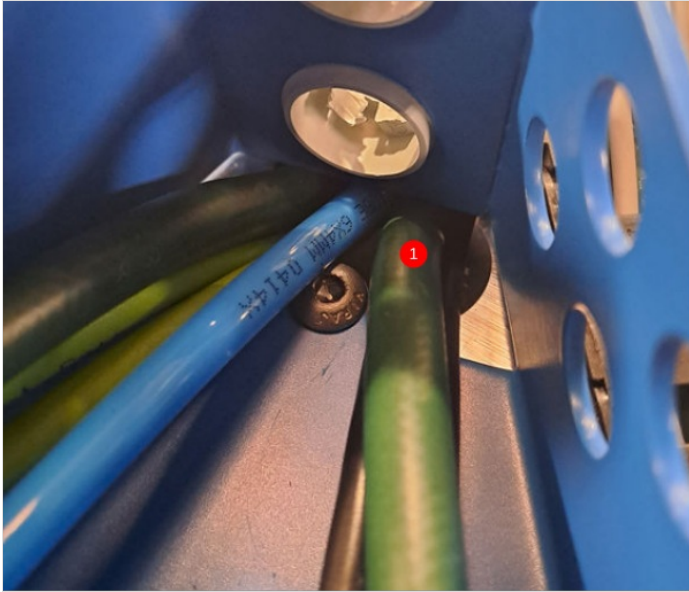
Feed motor cable through energy chain and reconnect as shown



## Step 7 - Mount pre assembled connection boxes

1 Mount connection boxes using M5 x 10 button head at cable end and 2 off M5 x 12 cap heads with washers at other end

2 Cables should be separated as shown



## Step 8 - Clearance checks

It is vital to check clearance in the following area. There must be no contact in this area when the spindle is plunged forward. If contact is occurring, the connection box will need adjusting to gain clearance

To Adjust

- 1 Remove spindle connection box
- 2 Elongate mounting holes to give movement in the direction required
- 3 Refit and adjust to achieve clearance

