

R0015011 Bench assemble Gripper

Bench assembly of Material Gripper

 Difficulty **Medium**

 Duration **2 hour(s)**

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Comments

Introduction

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Tools Required

External circlip pliers

Standard Hex key set

Standard spanner set

Reed switch setting box

Hammer

Standard screwdriver set

Rule

Parts Required

B0001106 x 20

D0015095 x 8

D0015096 x 2

D0015086 x 1

B0000034 x 2

D0015084 x 2

D0015083 x 1

D0015082 x 1

E0000366L x 1

B0001182 x 2

M0001182 x 2

D0015756 x 1

P0001047 x 1
P0001041 x 1
P0001128 x 1
P0001198 x 2
P0001120 x 1
D0015431 x 1
B0000437 x 1
D0015430 x 1
D0015090 x 2
D0015085 x 1
D0015102 x 2
D0015103 x 2
D0015104 x 2
D0015170 x 2
P0000049 x 1
D0015097 x 2
D0015101 x 2
D0015292 x 1
E0000336 x 1

Step 1 - Unless otherwise stated

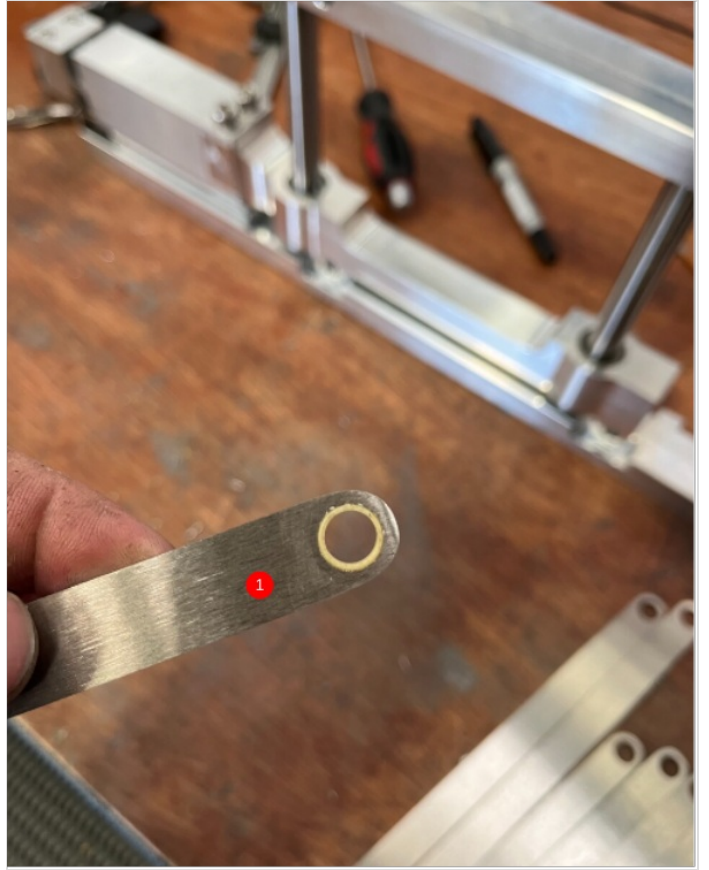
Use Loctite 243 on all fasteners
Pen mark all bolts once finalised



Step 2 - Fit bushes and bearings

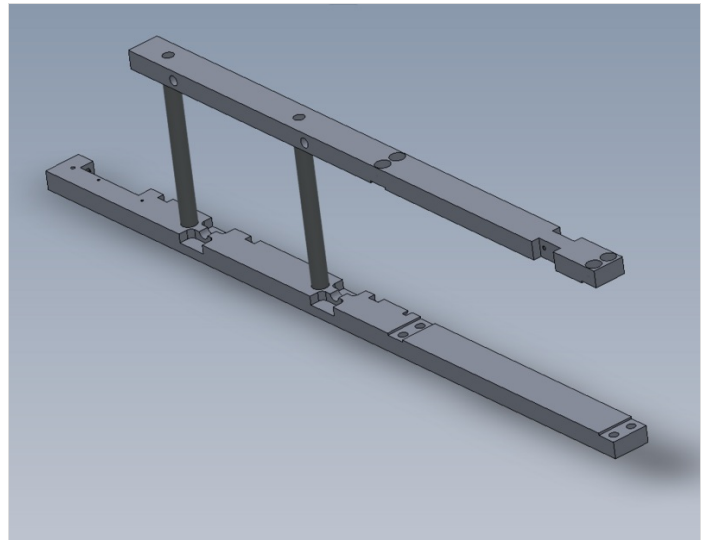
1 Fit bushes B0001106 (20 off) to
8 off D0015095 link bars
2 off D0015096 link bars

2 Fit bearings B0000034 x 2 into D00015086 grip slide body. Use grease to lubricate bearing before assembly



Step 3 - check fitment of D0015084 shafts

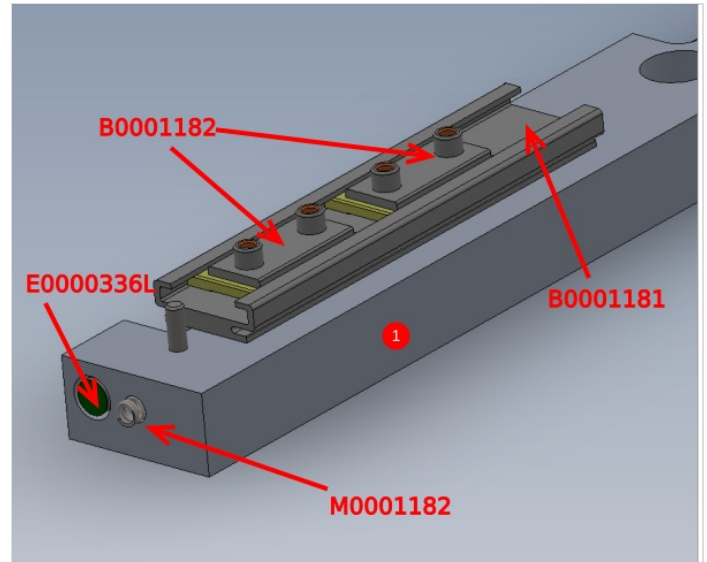
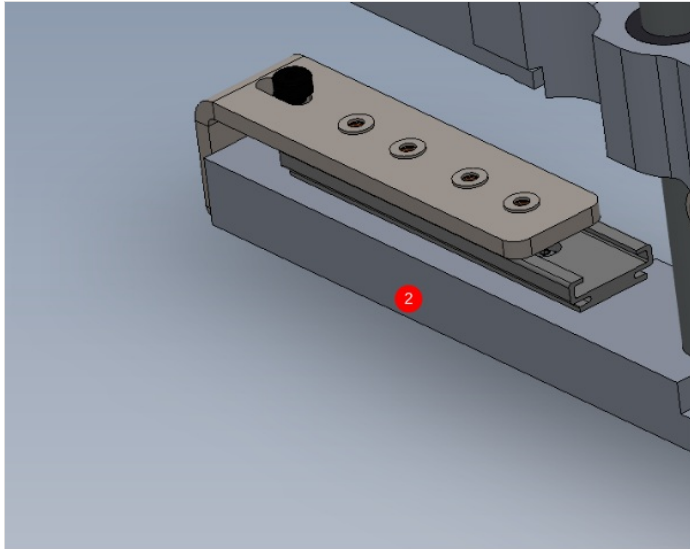
check shafts fit correctly into bores of D0015082 gripper bottom bar and D0015083 gripper upper bar



Step 4 - Assemble load switch plate

1 Use M4 x 6 panhead to attach B0001181 rail to gripper base
Fit E0000336L sensor and M0001182 spring to main base

2 Use M5x 6 x 16 shoulder bolt and M4 x 6 pan heads to attach D0015756 lever to assembly





Step 5 - Assemble cylinder P0001120

Fit air fitting P0001198 to cylinder
Remove 32mm nut from cylinder and discard
Mount reed switch and band (P0001041 x 1 P0001047 x 1
P0001128 x 1) to cylinder in piston retracted position , mark as
X291



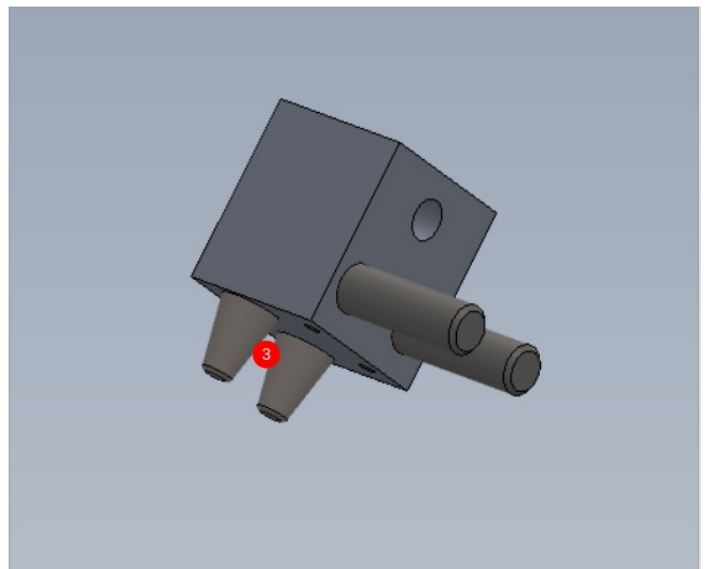
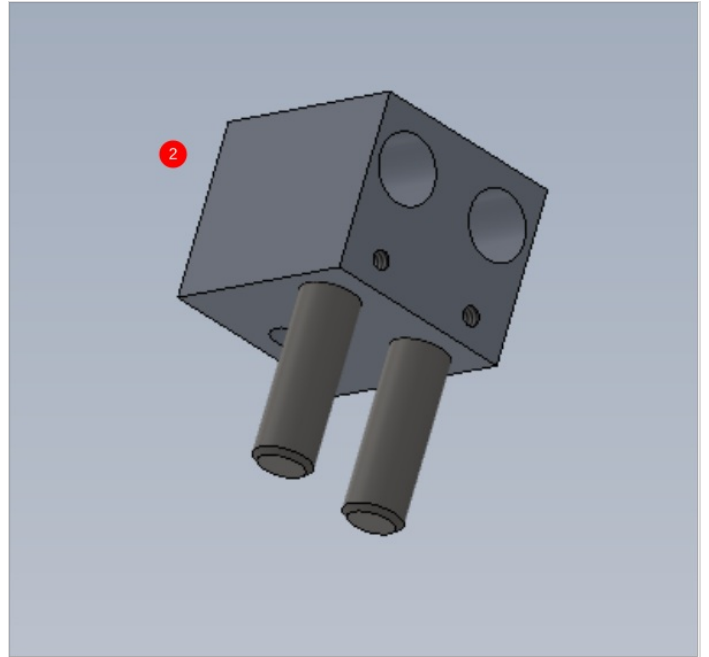
Step 6 - Assemble grip pin assembly

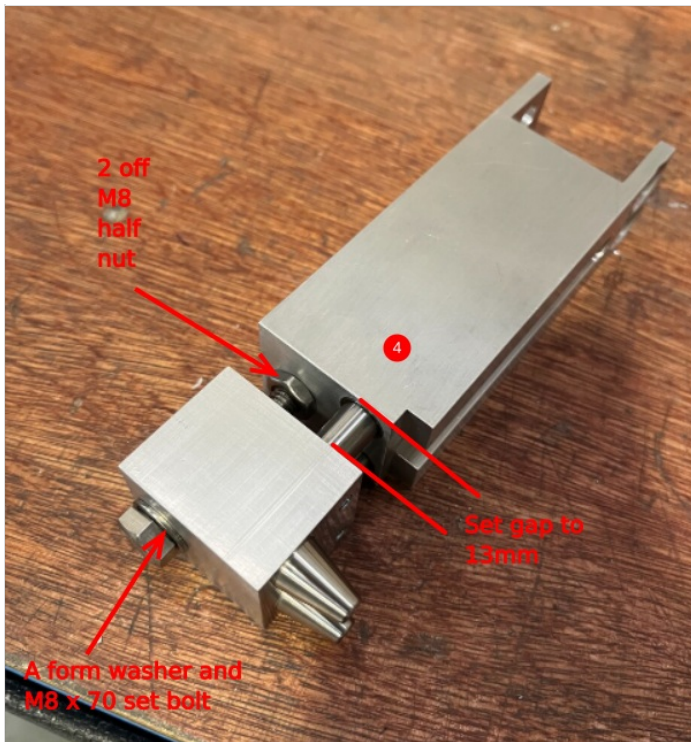
1 Fit bushes B0000437 x2 to body D0015431

2 Use 2 off 10mm x 40mm dowel. Ensure dowels fit correctly in nose D0015430. Check dowels have pushed all the way to the bottom of the bore. Secure with 2 off M4 x 8 grubscrew

3 Fit D0015090 Grip pin x 2 and secure with M5x 16 socket cap

4 Combine together and use m8 x 70 set bolt, a form washer and 2 x m8 half nuts to secure. Set gap to 13mm and lock all fasteners

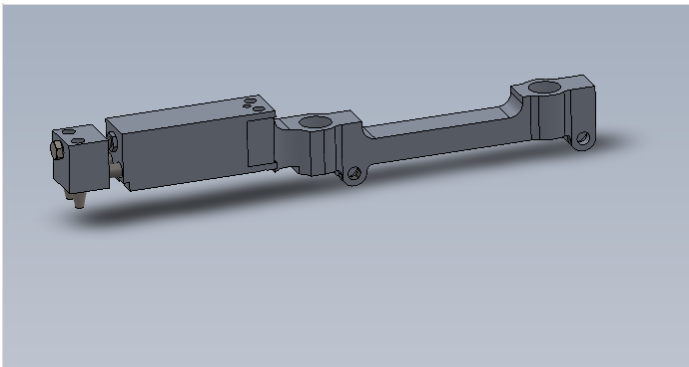


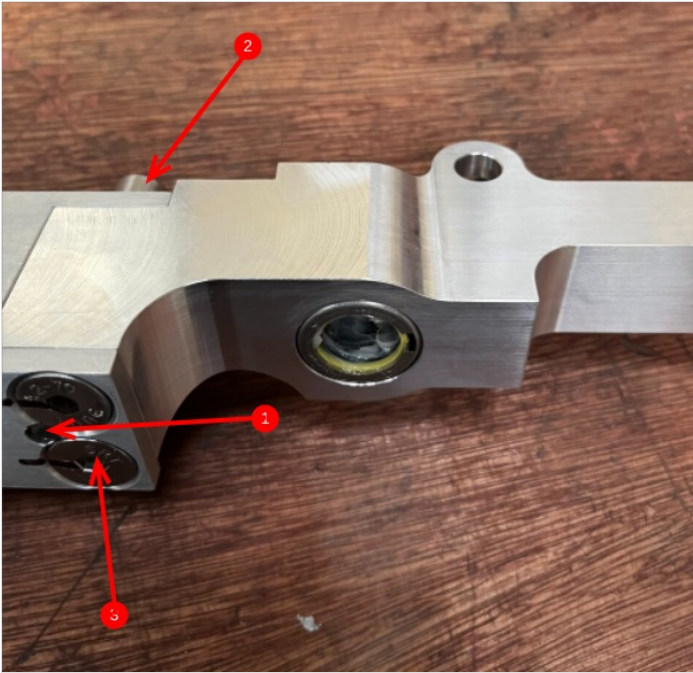
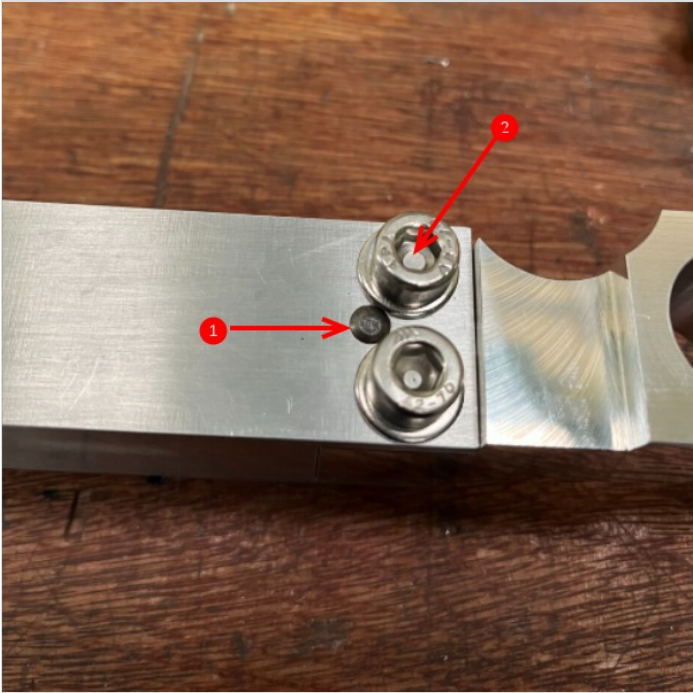


Step 7 - Mount grip pin assembly to grip slide

Combine parts

- 1 Use 2 off 6mm x 16mm dowels to align (1 top and 1 bottom)
- 2 M8 x 16 socket cap and A form washer
- 3 M8 x 20 countersink





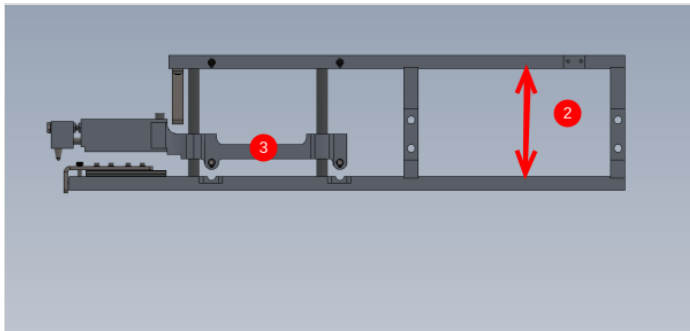
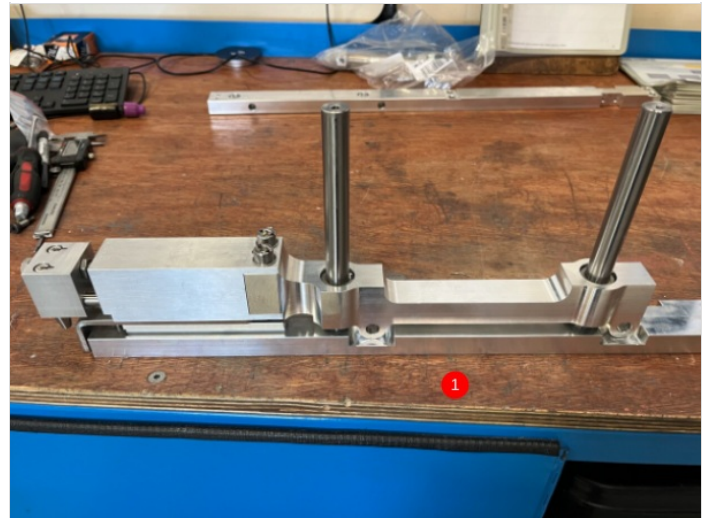
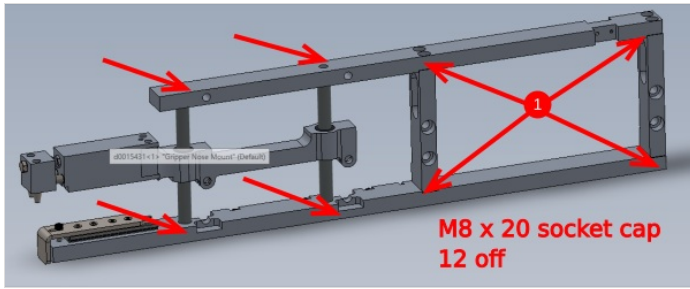
Step 8 - Assemble main frame of gripper assembly

Use 2 off D0015085

1 Assemble as shown using 12 off M8 x 20 socket caps

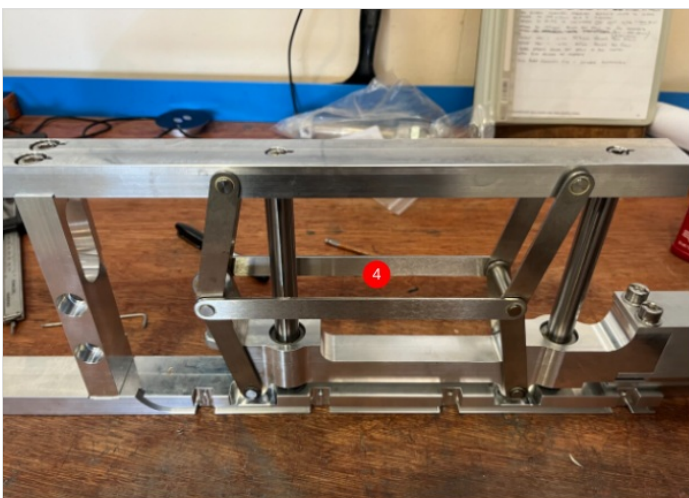
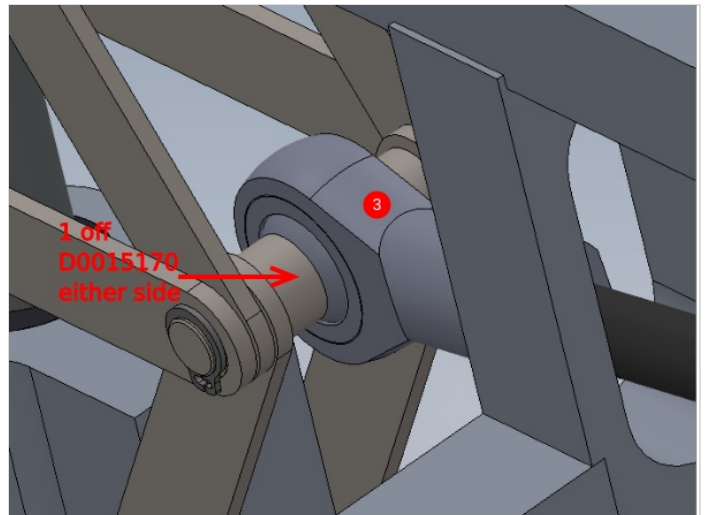
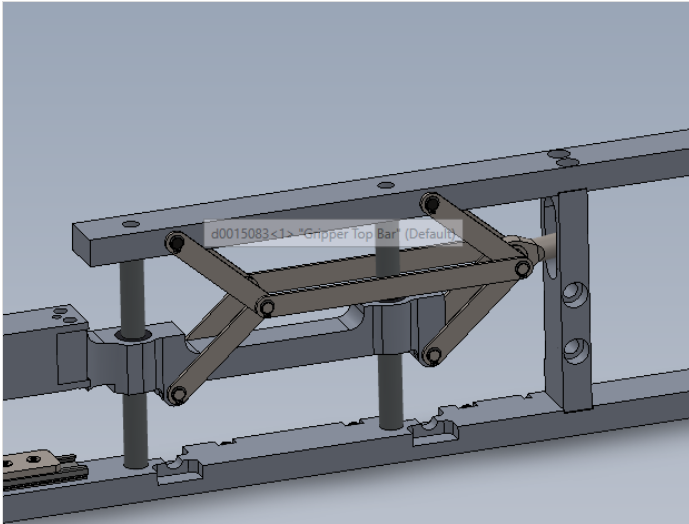
2 Check top and bottom bars are parallel

3 Check grip slide moves freely up and down



Step 9 - Fit link bars to assembly

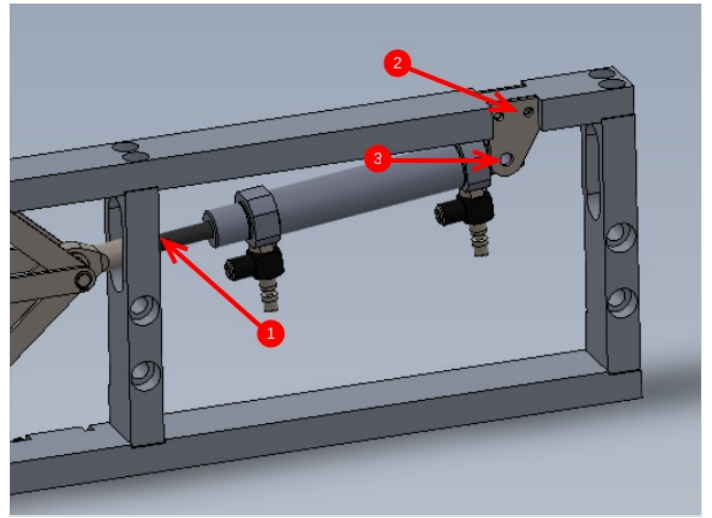
- 1 Use 2 off D0015103 and 8mm external circlips (B0000200) and assemble two off as shown
- 2 Use 2 off D0015102, 2 off D0015104 and assemble as shown with 8mm circlips
- 3 Use 2 off D0015170 gripper spacers and P0000049 spherical end and add as shown
- 4 Add remaining link shafts and circlips



Step 10 - Fit Cylinder assembly

Fit assembled cylinder unit to gripper frame

- 1 Wind cylinder thread into spherical bearing lock cylinder nut off with 1 thread of cylinder piston exposed behind lock nut
- 2 Use M5 x 10 with a form washer to secure D0015097 2 off mounting plates
- 3 Use M8 x 30 with M8 nyloc nut to secure cylinder to brackets



Step 11 - Add mounting brackets

1 Fix as shown 2 off D0015101 brackets with 4 off M10 x 40 socket caps

2 Mount Sensor bracket D0015292 with 2 off M5 x 30 socket caps, A form washers and M5 Nyloc nuts. Mount E0000336 as shown using both lock nuts and shake proof washers provided with sensor

