

## WASP Extended Shuttle Fitting

### Process Overview

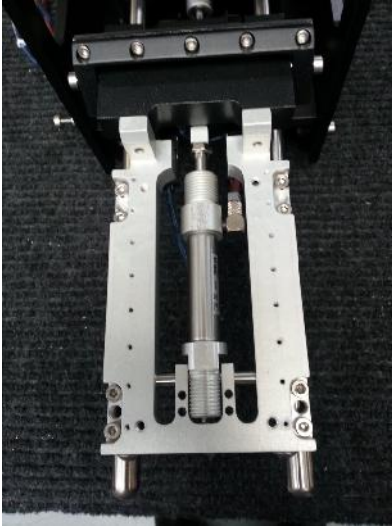
Tools needed; metric Hex key set

Remove Wasp Plate sealer from all power and pneumatic supplies; situate the unit on a clear work area for access.

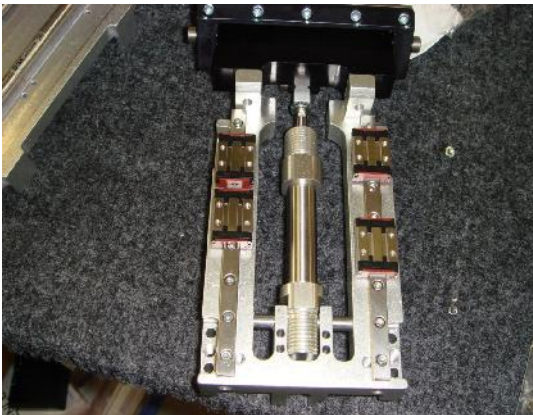
Ensure the Wasp plate sealer has 'cooled down' to enable safe handling of unit before starting any actions. Remember the plate heater block could have been at an initial temperature of around 170 degrees centigrade!

Remove the main cover and service cover (refer to the cover removal guide)

1. Ensure plate sealing heater block is 'up' and not resting on plate shuttle. (Push plate sealing heater block up out of the way if not.)
2. Pull plate shuttle forward out of the interior of unit to gain access.
3. Remove the existing standard plate carrier, there will be no need for this part anymore. The shuttle base will now be exposed, see picture below:

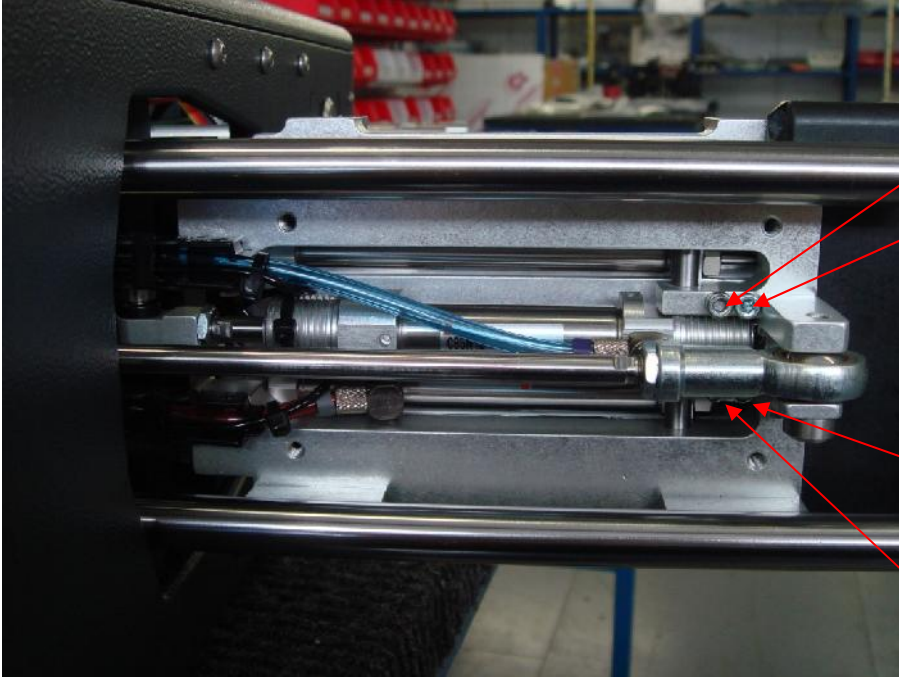


4. Fit the miniature rails (3034-10075) to the shuttle base with M2 x 4mm Cap Head screws (x14)
5. Do not fully tighten screws yet! **DO NOT REMOVE CARRIAGES FROM RAILS** or bearings will escape rendering assembly inoperative. See picture below of the miniature rails fitted to the shuttle base.

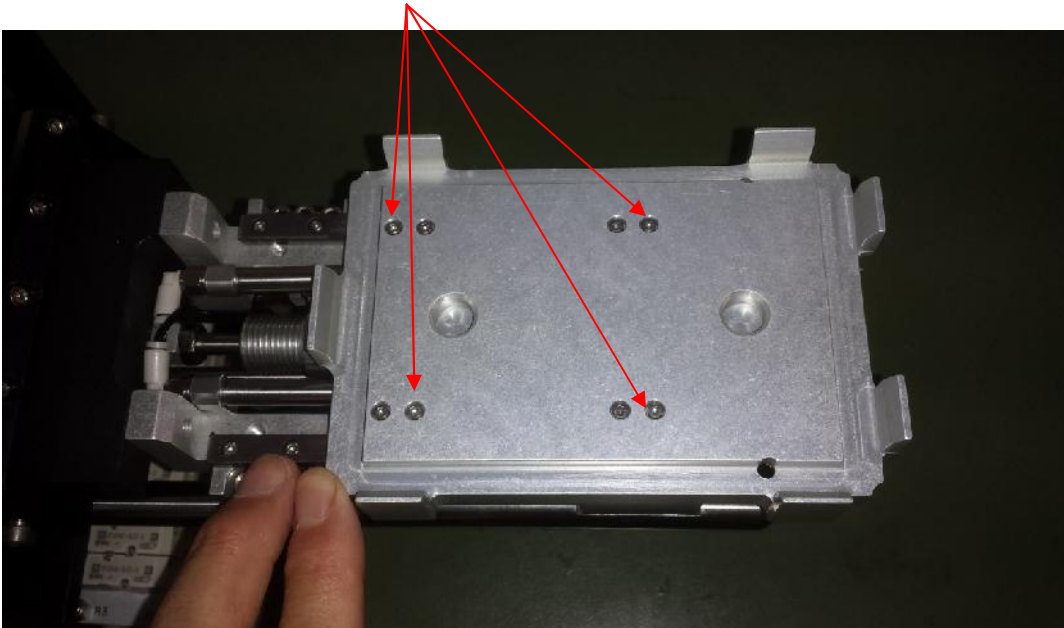


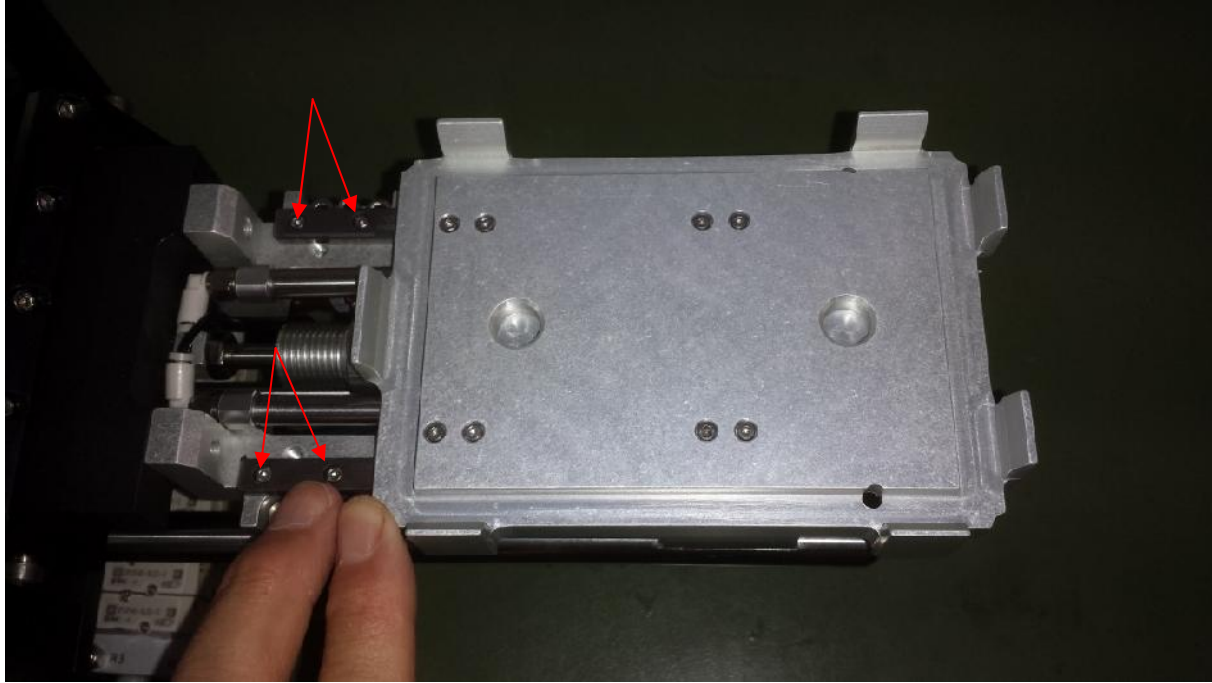
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6. Fit the pre assembled cylinders to the shuttle base by fixing the mounting brackets (28694-028 & 029) to the top of the shuttle base, to do this use M3 x 16mm Cap Head screws (x4) and screw through from below the shuttle base as highlighted in the picture below- When tightening the cylinder brackets push the cylinders against the shuttle base.



7. Fit the Shuttle plate to the miniature rail carriages using M2 x 6mm Cap Head screws (x8) using the holes highlighted in the picture below:

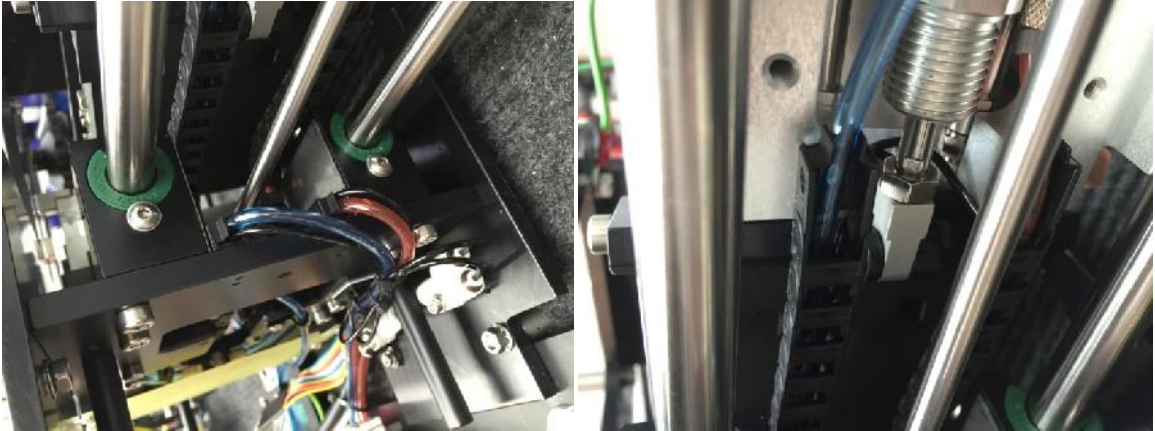




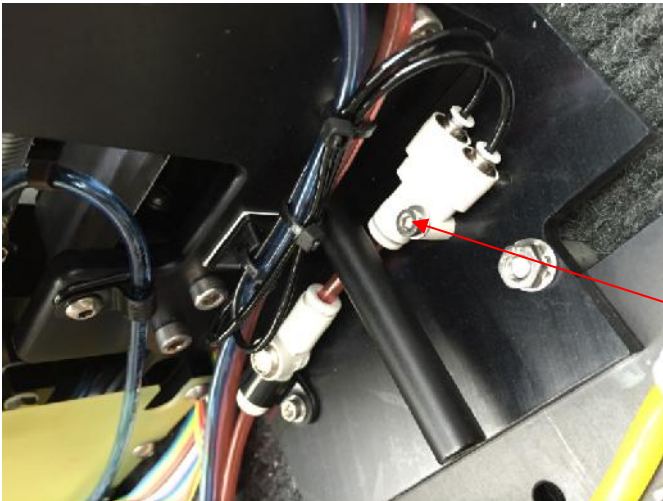
8. Now the shuttle plate is attached to the bearing carriages, this will align the bearing rails parallel to each other.  
Move the shuttle plate to the furthest forward position to access the first two of the bearing rail screws currently unsecured. Tighten the two available screws on each bearing rail (Highlighted).
9. Now remove the shuttle plate from the bearing carriages to access all the remaining bearing rail screws and ensure these are tightened and secured.
10. The shuttle plate can now be finally located and secured.

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11. Lay the unit on its right hand side (looking at the front of the unit) on a clear work area.
12. Refer to [Base Access procedure](#) to gain access to internal components.
13. Feed the 2mm black air pipe through both shuttle drag chains to the cylinders using 1 pipe in each chain (start at the bottom and work your way up). See picture below to see entrance and exit of the pipes to the drag chain:



14. The next step will require drilling and tapping a threaded hole into the side plate, please drill a 2.5mm diameter hole 40mm up from the base and 40mm in from the front face and tap out to M3 x 0.5 pitch. See picture below for hole location:



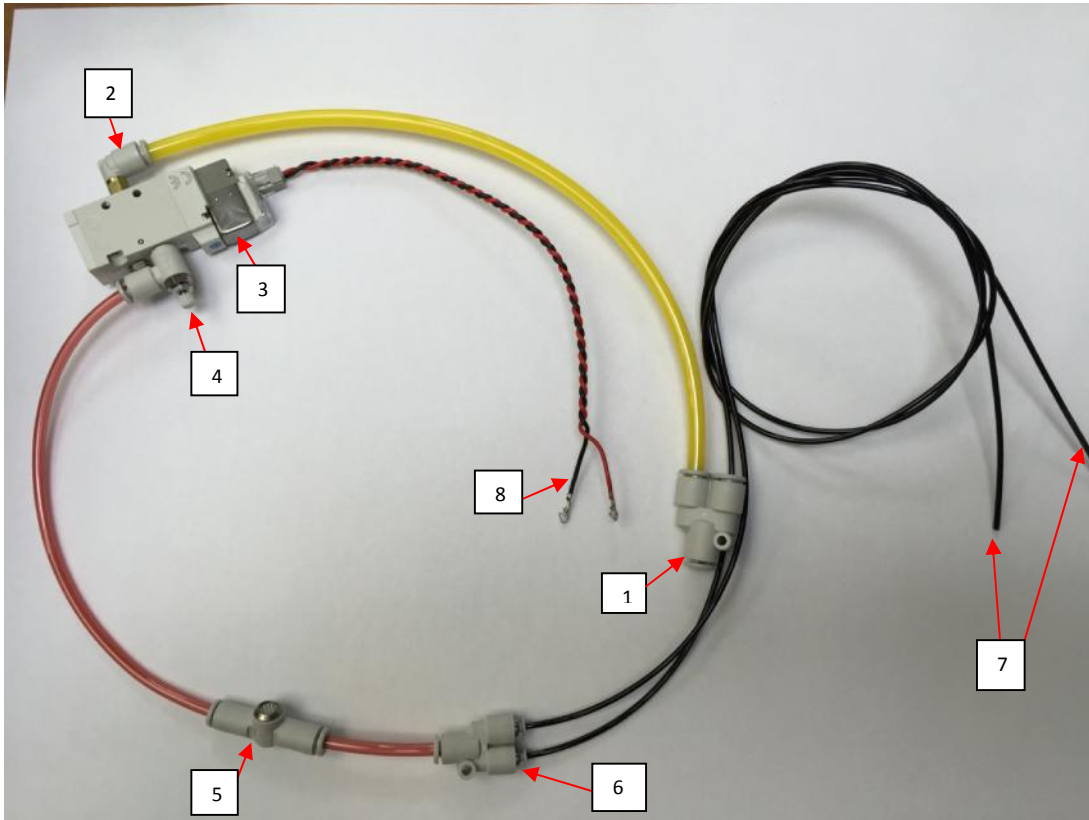
M3 hole to be added.

15. Fit 4mm to 2mm Y fitting using a M3 x 14 Cap Head screw to the new hole and fit the quick exhaust valve using the P clip and a M3 x 6mm Cap Head screw and M3 washer.



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### Additional Parts list



1: 4042-10018 6mm Y fitting, this needs to be cut into the existing 6mm Yellow pipe that goes from the manifold to the stand alone solenoid valve.

2: 4042-10107 6mm to M5 air fitting.

3: 4045-10083 Extended shuttle solenoid valve, this needs to be fitted to the existing stand alone solenoid valve.

To do this remove the M3 x 30mm Cap Head screw that's fitted closest to the silencer and replace with a M3 x 50mm Cap Head screw, the replacement screw needs to go through the new solenoid valve and the old one fixing them both to the original hole in the base plate- please note there is an M4 nut supplied to be used as a spacer between both valves.

Feed a cable tie through the remaining fixing hole on the extended shuttle solenoid and tie it to the original valve.

4: 4042-10098 In flow speed controller.

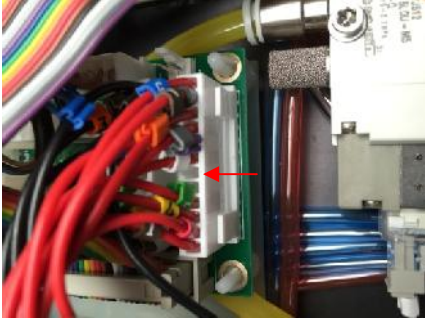
5: 4042-10046 Quick exhaust valve.

6: 4042-10273 4mm to 2mm Y fitting.

7: 2mm Black pipe to be routed to the shuttle extension cylinders.

8: Solenoid input, please connect red and black wires to the empty holes in the 10 way molex connector (next to wire 9) as in the following picture:

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16. To set the extended shuttle speed the unit must be powered.  
Press the blue button located on the top of the solenoid valve, **Caution** to be taken when pressing this button as the shuttle will retract into the machine at a fast speed.  
  
When the blue button is released is when you adjust the speed to a slow and smooth motion.  
To adjust the speed you use the flow controller (4042-10098) that is mounted to the new solenoid valve, turning clockwise will decrease the flow making the shuttle move slower.
17. You will now need to carry out the final part of the conversion which is setting the flatness, first seal a plate to see if the flatness is satisfactory. If you find that the flatness has been compromised since fitting the extended shuttle upgrade please adjust it by following the steps below:
18. To adjust the Flatness of shuttle to obtain full plate seal.

If after changing from standard to extended shuttle the sealed plate does not have a consistent seal across plate surface ( for example;- a firmer seal at one end of plate compared to other) You may have to adjust Flatness of shuttle plate to compensate.  
Ensure the heater block is clear from Shuttle.  
The shuttle plate extended will be out of the main Wasp cover.  
Now physically pull the extended shuttle out to allow access to the four 'jacking' set screws in each corner of shuttle plate.  
The Shuttle plate is locked into position with two m4 x 20 hex screws at each corner position, these screws must be loosened by approximately ½ turn, now you can adjust the m6 set screw located between the locking screws to compensate for uneven sealing.  
The set screws act upon the shuttle rods, so in effect lift or lower the shuttle plate to affect adjustment.  
After set screw adjustment re tighten the locking screws and re test seal.

Repeat this operation to ensure an even seal is acquired across sealed plate surface.

Example:- if front right corner of sealed plate has a 'lighter' sealing than the other areas of the plate, this suggests the plate shuttle is low in this corner.  
To compensate for the difference, loosen the m4 x 20 locking screws, and screw in the m6 set screw ½ turn- this will lift up the plate shuttle in this position and in turn make the seal 'firmer'  
Always lock all screws after any adjustment and test the sealing.