

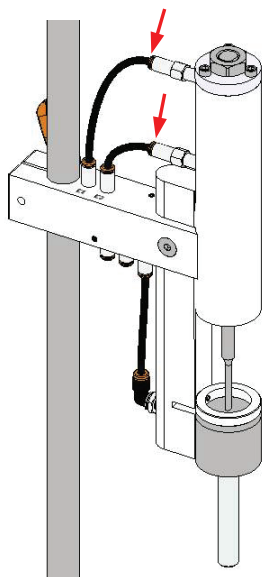


analytical

DBS Punch Interchange Technical Guide

PURPOSE

- The purpose of this document is to familiarize the user with the steps necessary to interchange a punch in the DBS 2018 apparatus
- Please note that only punches of identical diameter (ie 6mm for 6mm) can be interchanged due to the associativity between punch and die
- Therefore, punches are only meant to be replaced in the event of breaking or becoming dull

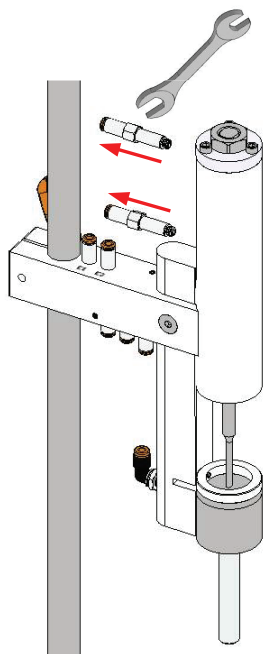


STEP 1 – DRAIN AIR FROM SYSTEM

Disconnect the air supply.

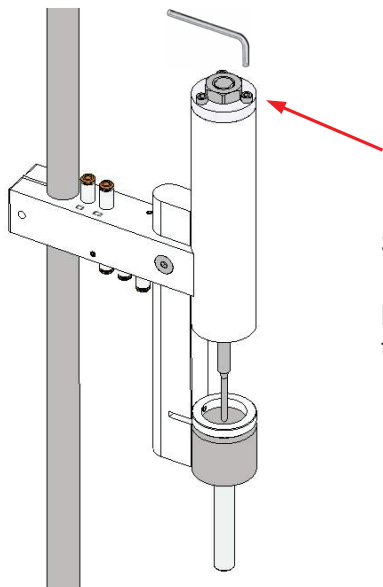
Drain the air from the system by pressing the foot pedal until the punch no longer moves.

Remove the two air hoses as indicated by the red arrows.



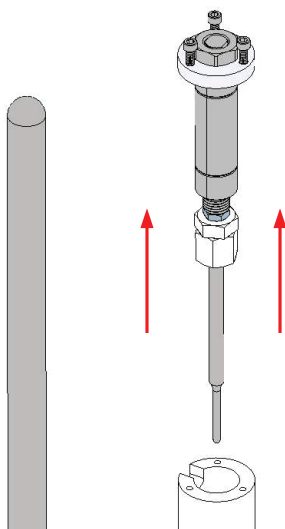
STEP 2 – REMOVE TUBE FITTINGS

Remove the two 10-32 tube fittings as shown. You may have to use an 8mm wrench if its too difficult by hand.



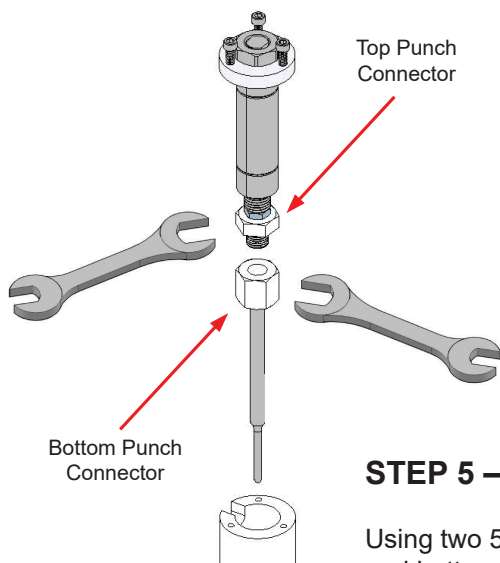
STEP 3 – REMOVE CAP SCREWS

Remove the 3 socket cap screws on top of the DBS with a 7/64" hex allen key.



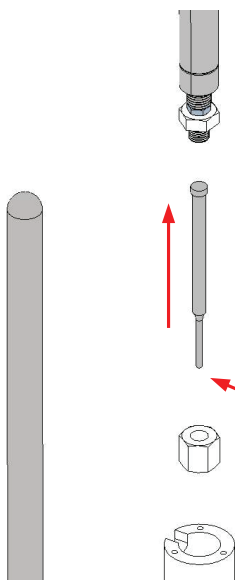
STEP 4 – PULL OUT CYLINDER

Pull the cylinder assembly out of the tube.



STEP 5 – SEPARATE CONNECTORS

Using two 5/8" hex wrenches, separate the top and bottom punch connectors.

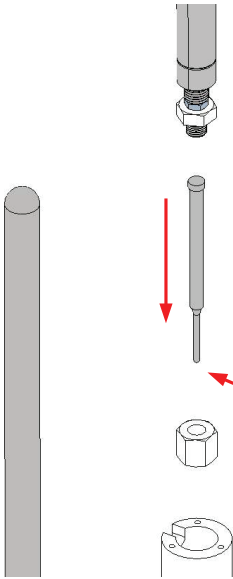


STEP 6 – REMOVE PUNCH

Remove the punch; it will be resting on the inside of the bottom punch connector – use caution while handling! Punch tip is sharp!

STEP 7 – INSERT NEW PUNCH

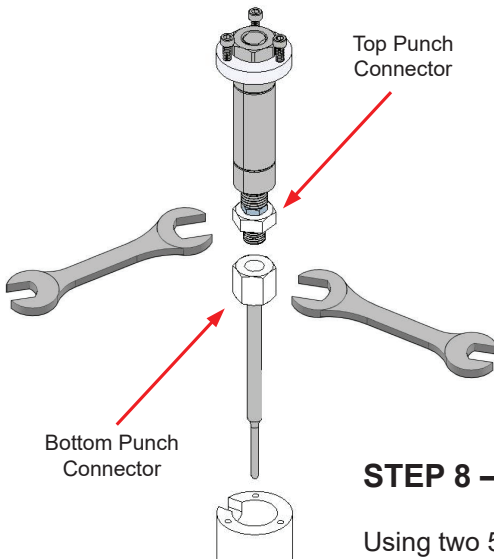
Insert new punch; it should rest on the inside of the bottom punch connector – use caution while handling! Punch tip is sharp!



Sharp Tip!

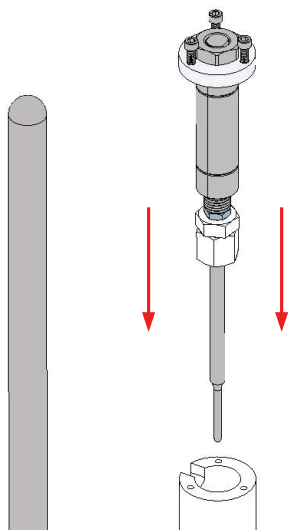


Proper punch seating
inside bottom punch
connector



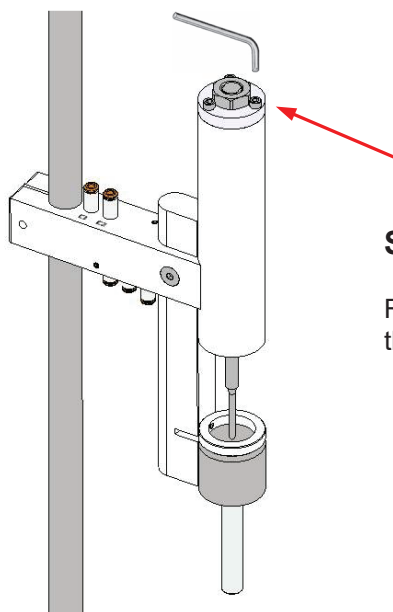
STEP 8 – ASSEMBLE CONNECTORS

Using two 5/8" hex wrenches, assemble the top and bottom punch connectors



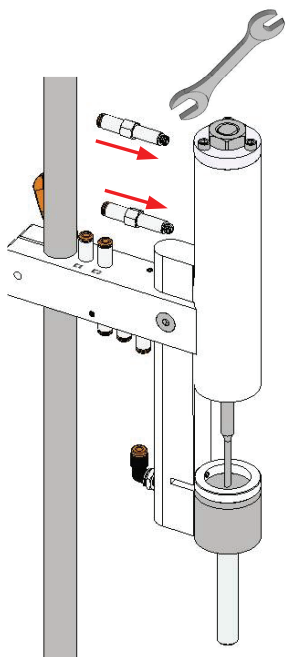
STEP 9 – REPLACE CYLINDER

Gently insert the cylinder assembly back into the tube – you may have to slightly adjust the insertion position to properly align the punch with the blue lower bushing – do not force!



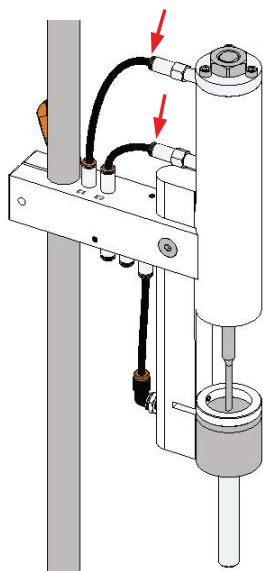
STEP 10 – REPLACE CAP SCREWS

Re-attach the 3 socket cap screws on top of the DBS with a 7/64" hex allen key.



STEP 11 – REPLACE TUBE FITTINGS

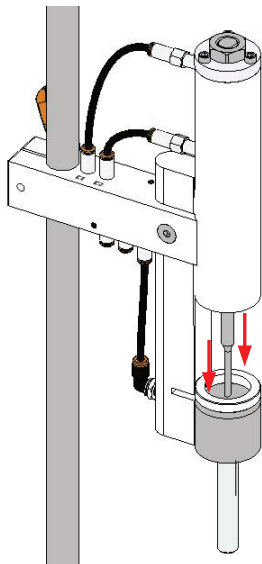
Replace the two 10-32 tube fittings as shown. Hand-tighten plus 1/8 turn with the 8mm wrench. **Very fragile! Do not overtighten or breakage will occur!**



STEP 12 – CONNECT AIR HOSES

Replace the two air hoses by pressing them back into the fittings.

Re-connect the unit to the air supply.



STEP 13 – MANUAL CYCLE

Manually test the alignment of the new punch by pulling it up and down 5-10 times, ensuring that it enters the die smoothly.

STEP 14 – SLOW PRESS

Slowly press down on the foot pedal and watch the punch to make sure it still enters the die smoothly.

