

164 Helpsheet



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Systems for Geotechnical Engineers and Geologists*

Hardware

Rowe & Barden Cell

Changing the Rubber Top-Bag

This helpsheet explains how to change the rubber top-bag in a Rowe & Barden consolidation cell (Hydrocon cell).

1) Removing the old Top-Bag

Carry out the following procedure to take apart the Rowe & Barden to remove the old top-bag from the cell:

1. Remove the top half of the hydrocon from the base by unscrewing the four black handled bolts and lift off the top of the cell.
2. Unscrew the back pressure tube from the top of the main body of the hydrocon (not from the piston the displacement is measured).
3. Remove the nut (which has the back pressure connector) at the top of the piston from the main part of the piston. To do this use a flat screwdriver at the base of the piston where it is attached to the top-bag to stop the piston rotating whilst you unscrew the nut with the back pressure connection from the top of the piston.
4. Take apart the top section of the hydrocon by unscrewing the four bolts on the top of the hydrocon.
5. Carefully pull apart the two halves of the top of the hydrocon, feeding the piston down through the top of the hydrocon as you pull the two halves apart.
6. Again using a flat screwdriver to stop the piston rotating, undo the clamping nut on the inside of the top-bag. Once this nut has been removed you can remove the piston from the top-bag.
7. Slide the top-bag and the clamping ring that is inside the top-bag out of the body of the hydrocon.
8. Remove the clamping ring from the inside of the top-bag.

2) Installing the new Top-Bag

Installing the new top-bag is carried out by reversing the process used to remove the old top-bag. Before doing this it is necessary to first make sure that you lubricate the new top-bag and all the 'O'-rings by lightly coating them with silicone grease.

Every once in a while you will need to take apart the hydrocon in the manner described above to lubricate the top-bag and 'O'-rings.