Figure 1: VTS environment as the user would see it through the HMD

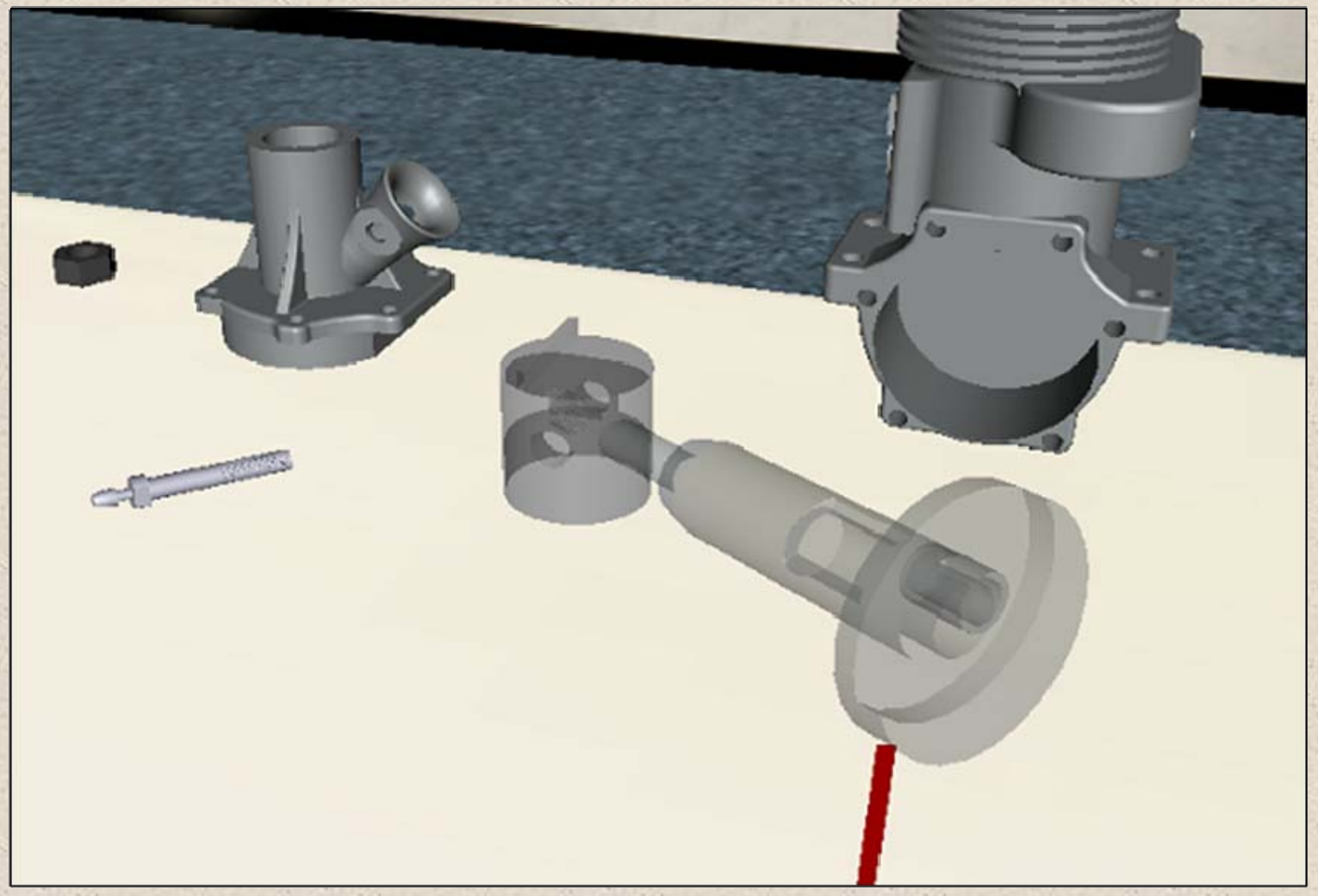

Figure 2: Two colliding parts become translucent, but movement is not restricted.

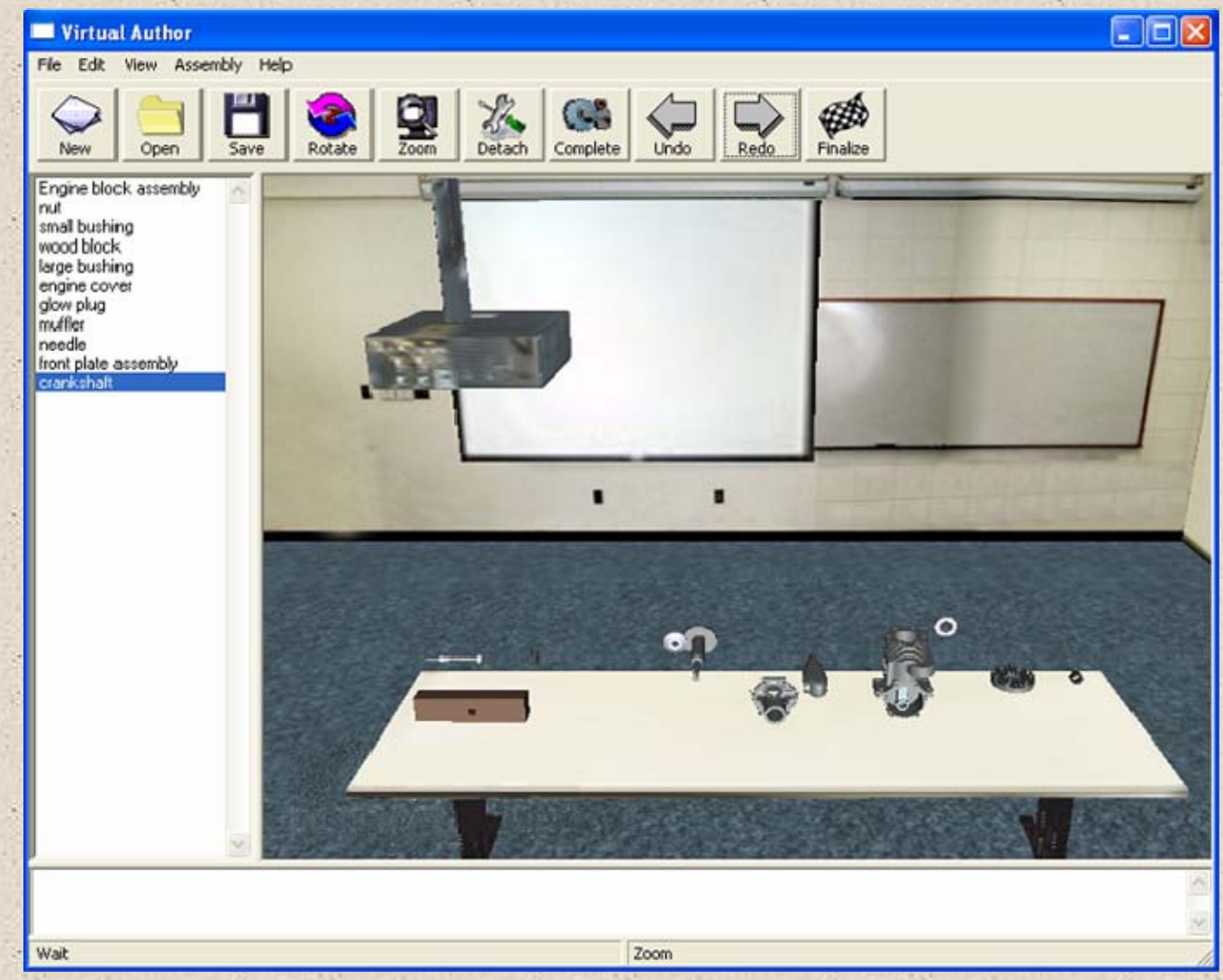

Figure 3: Parts are being animated dropping down on the table. Random positions were automatically generated by Virtual Author.

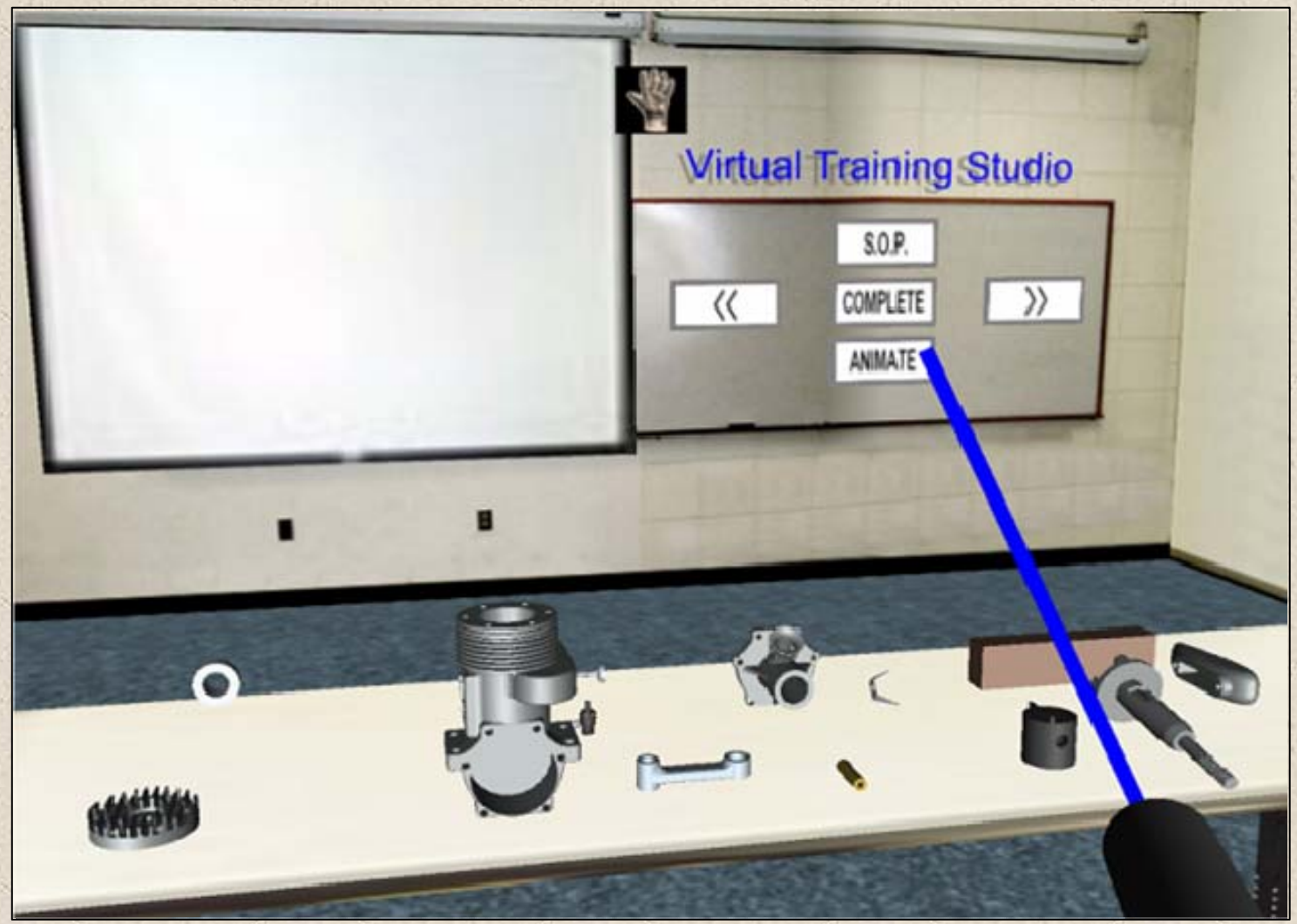

Figure 4: Instructor's view of the virtual environment run by Virtual Author

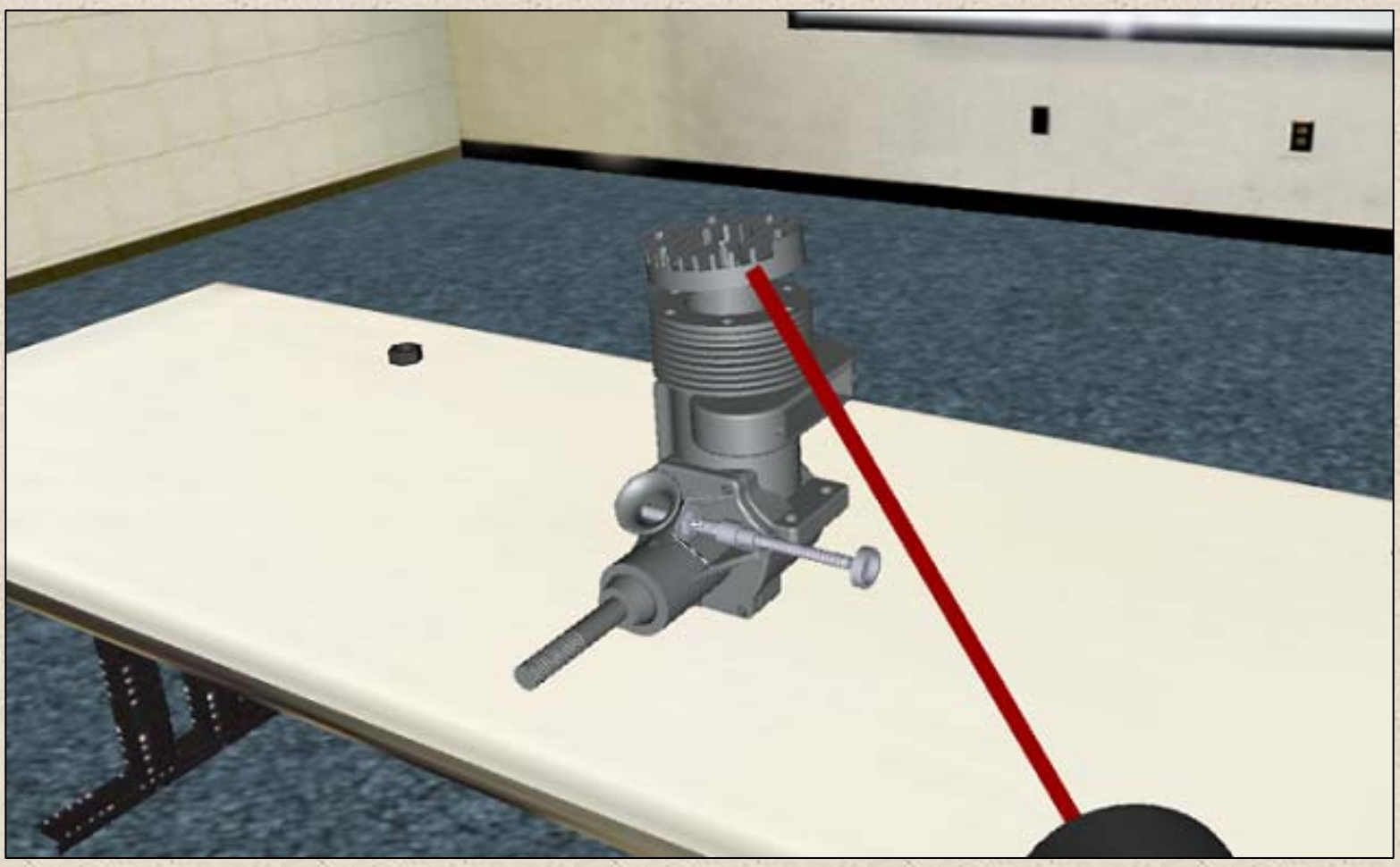

Figure 5: Virtual demonstration of attachment of engine cover to top of engine case

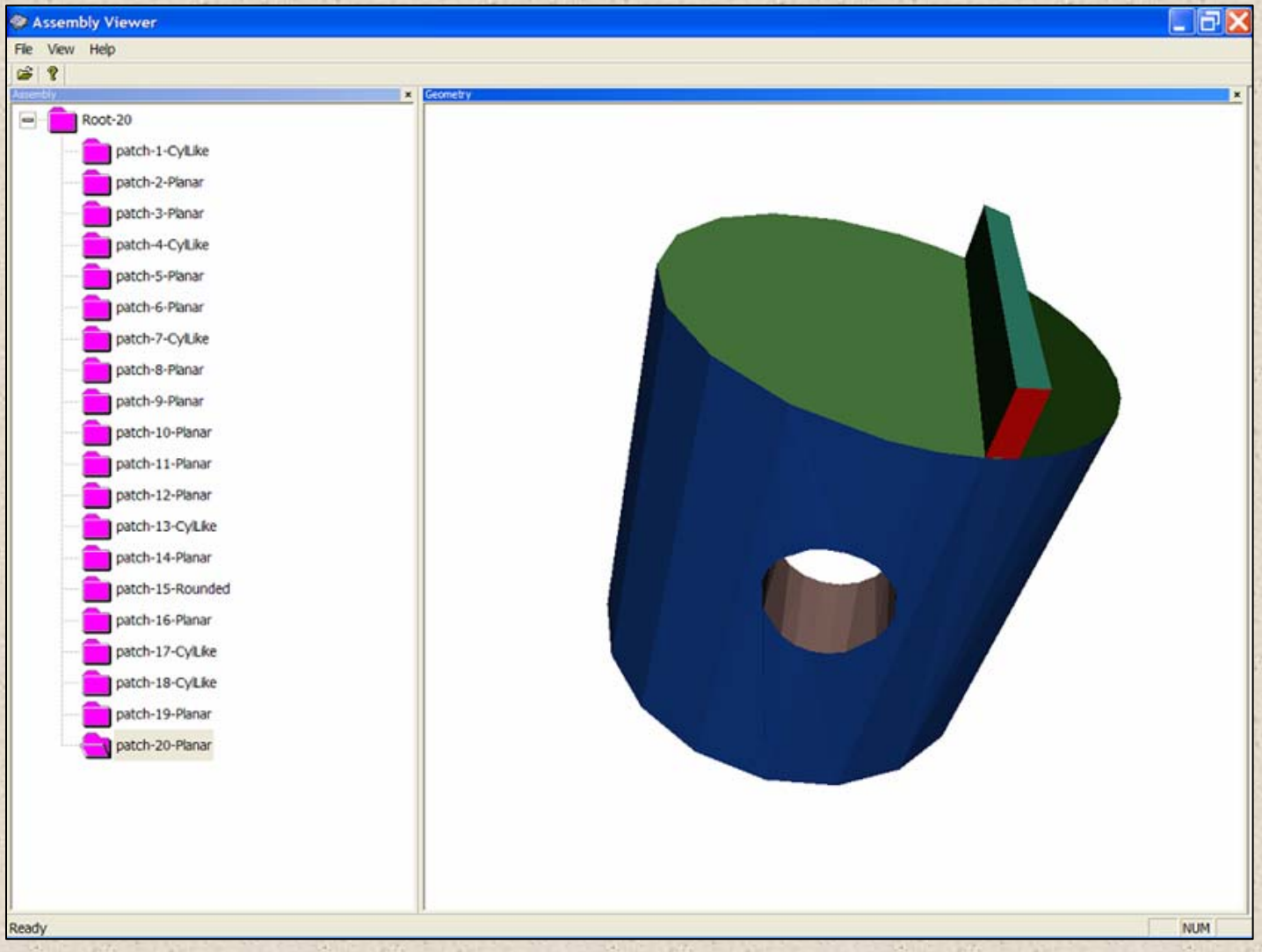

Figure 6: Segmentation performed on model airplane engine piston

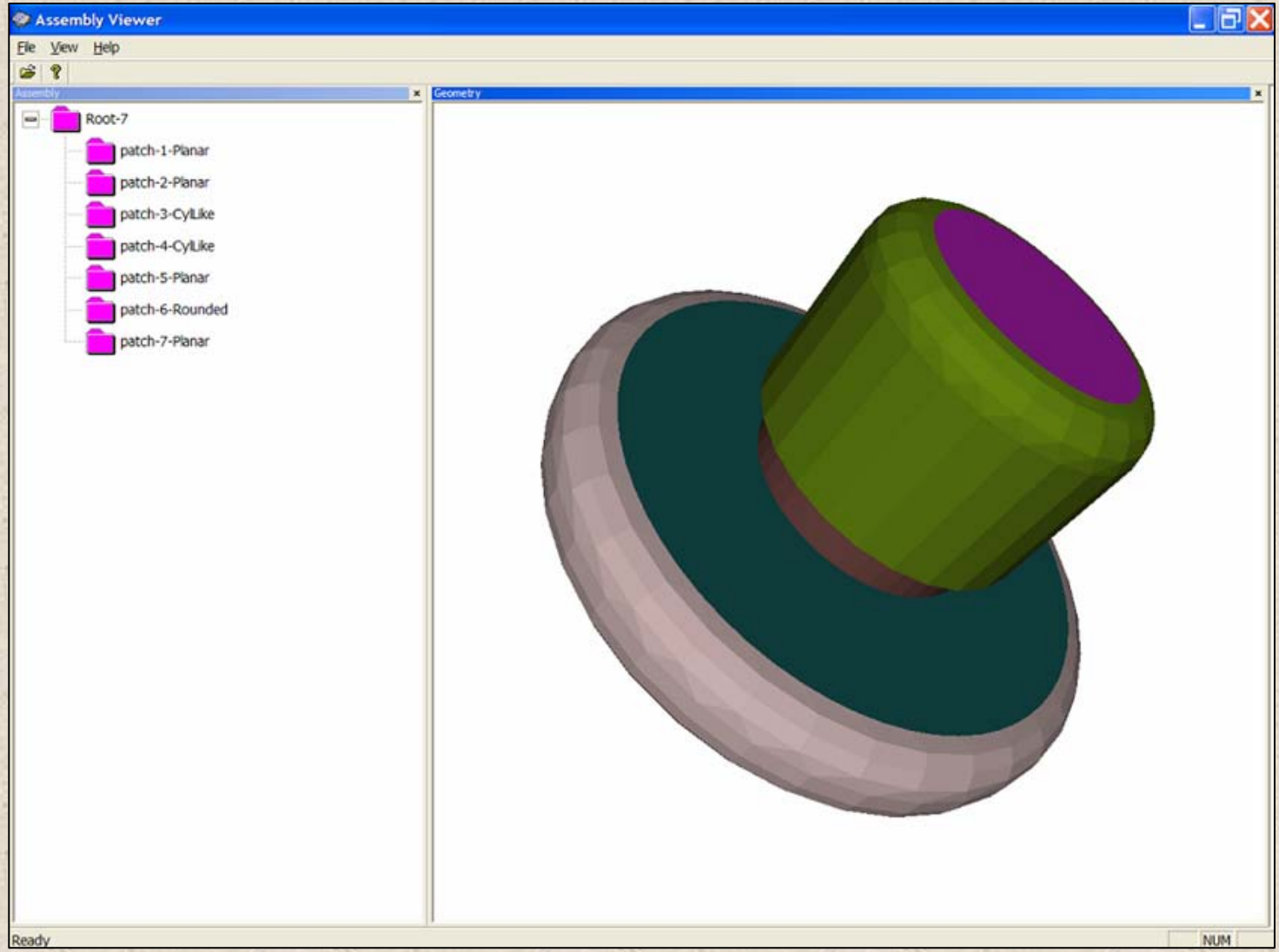

Figure 7: Segmentation performed on a parachute deployment device cartridge

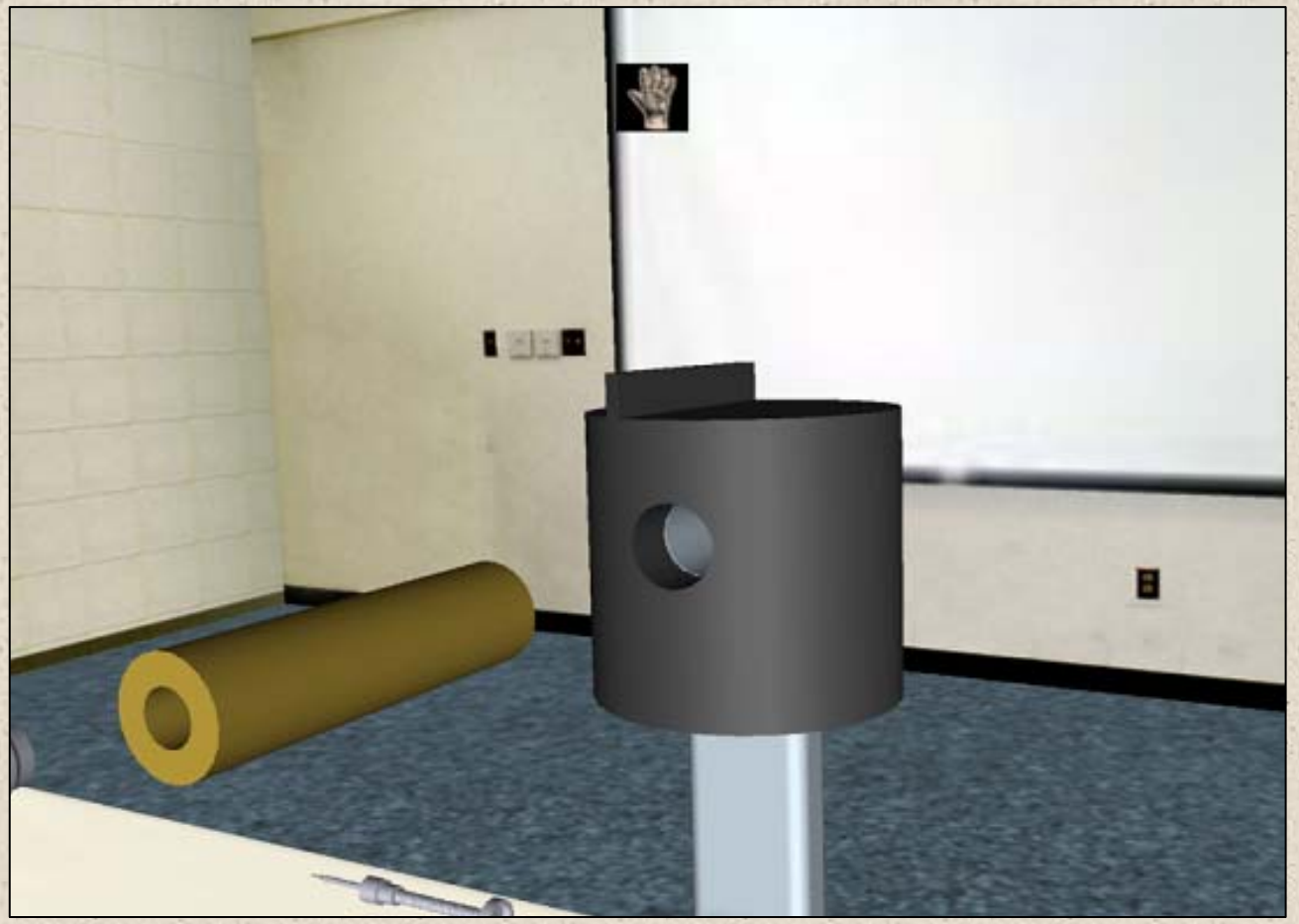

Figure 8: An example of subtype B4 symmetry where the pin can be inserted from two different positions (either side of the piston hole). For each position either the alternate or the primary orientation around the secondary axis may be used.

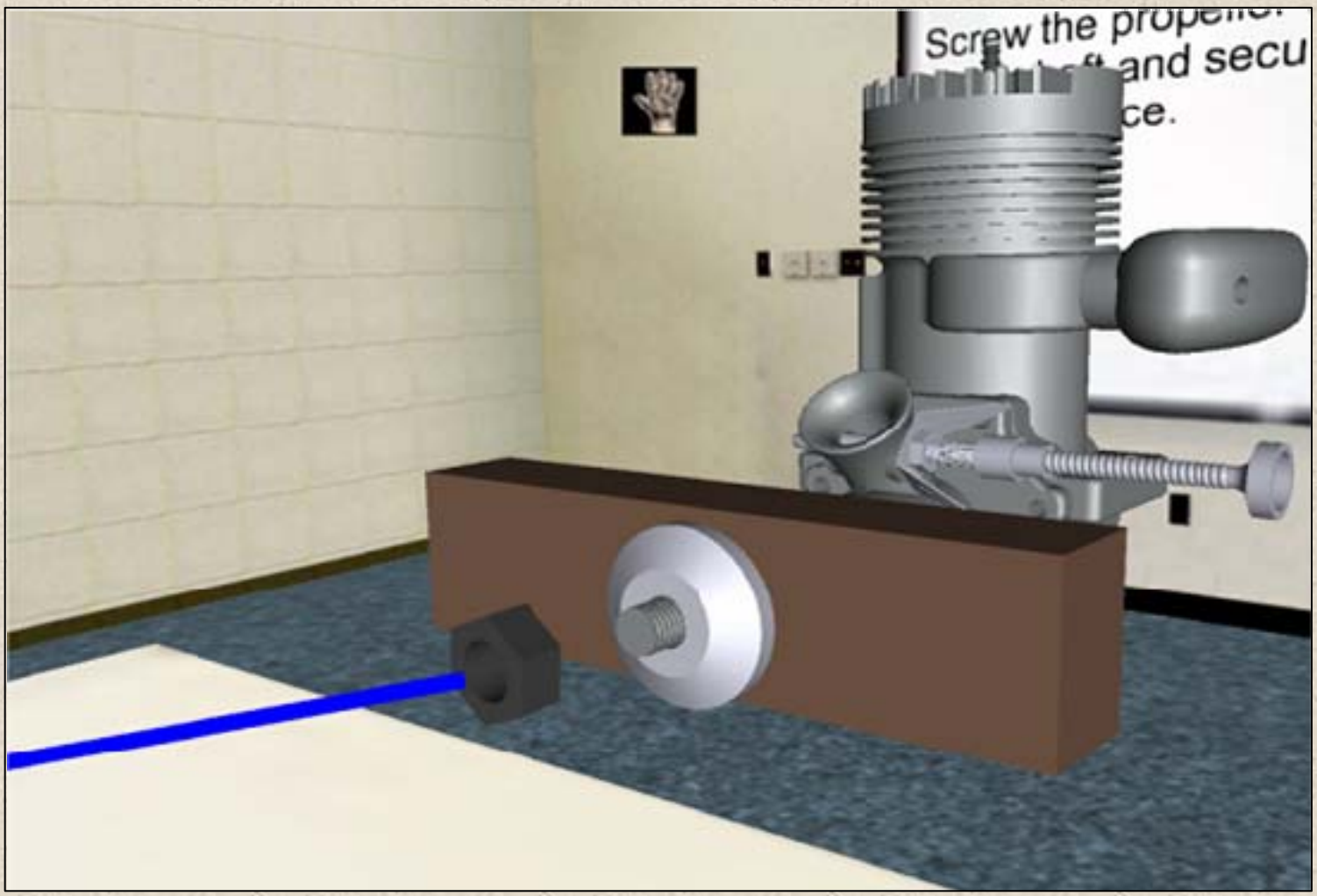

Figure 9: Animation of nut sliding onto threaded crankshaft rod can be made more efficient by taking advantage of the symmetry of the nut around the main axis (axis of the nut cylinder).

Figure 10: Placement of propellant grain at its alternate position

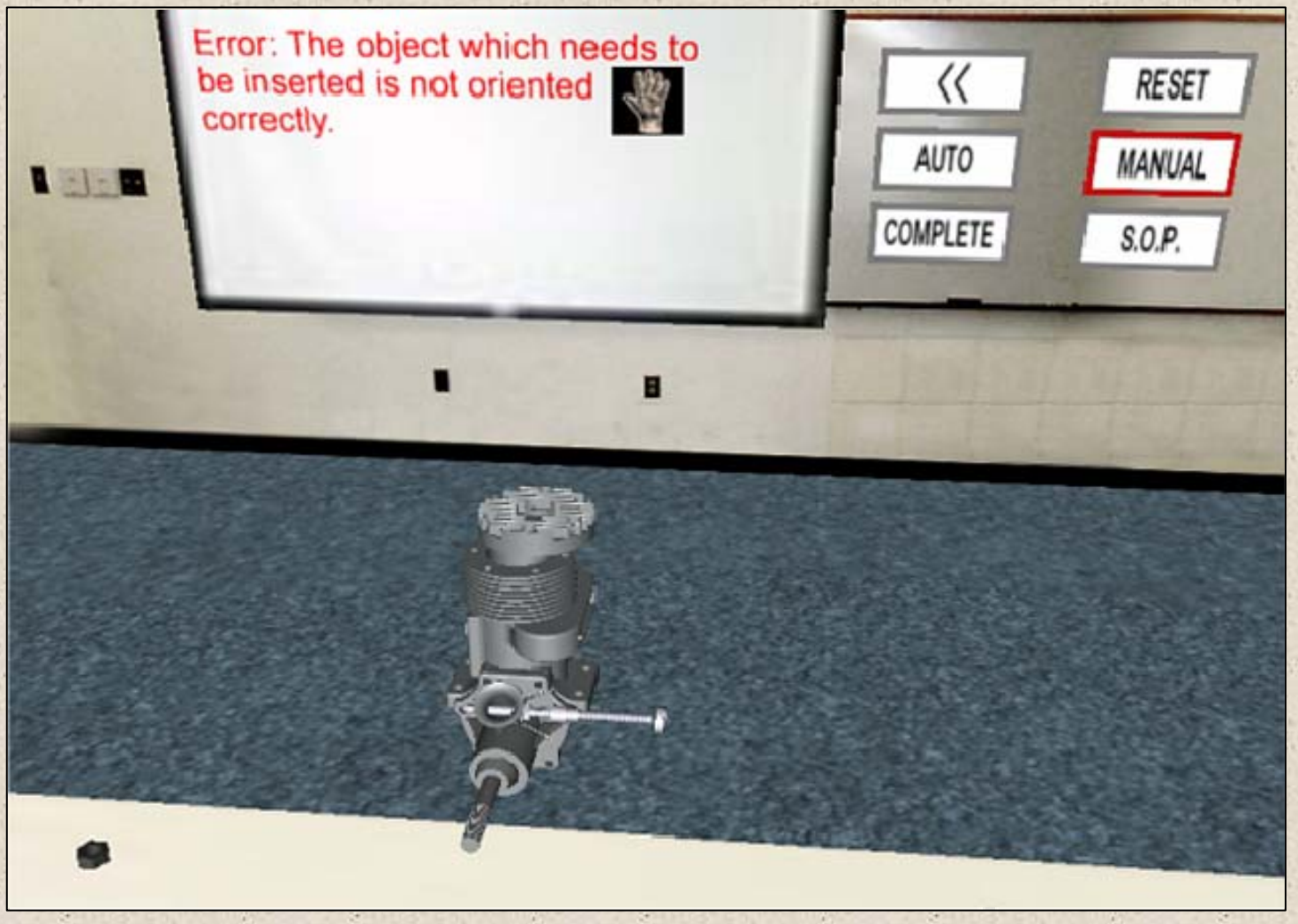

Figure 11: Virtual Mentor detects an orientation error.

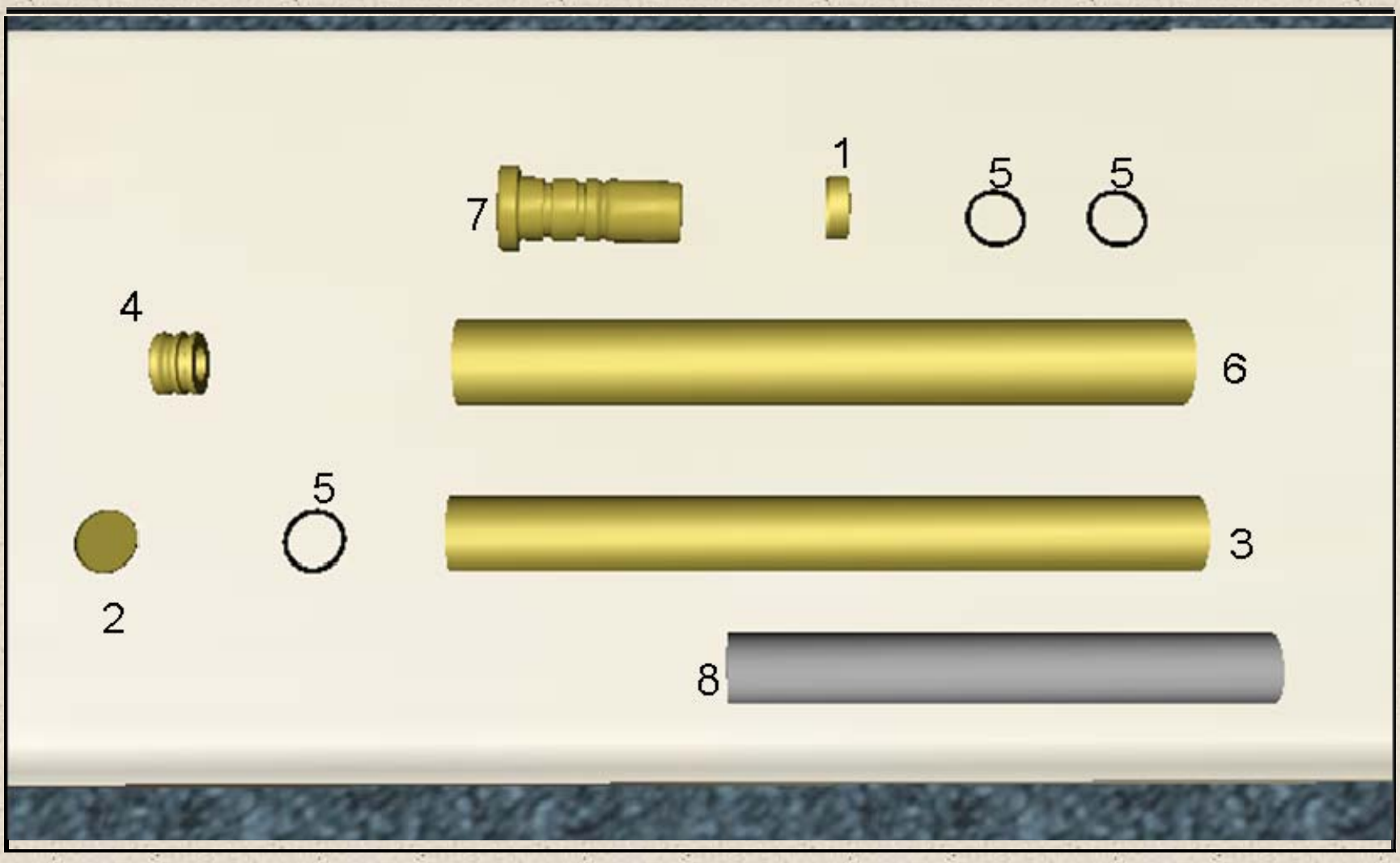

Figure 12: Components of a navy rocket motor assembly

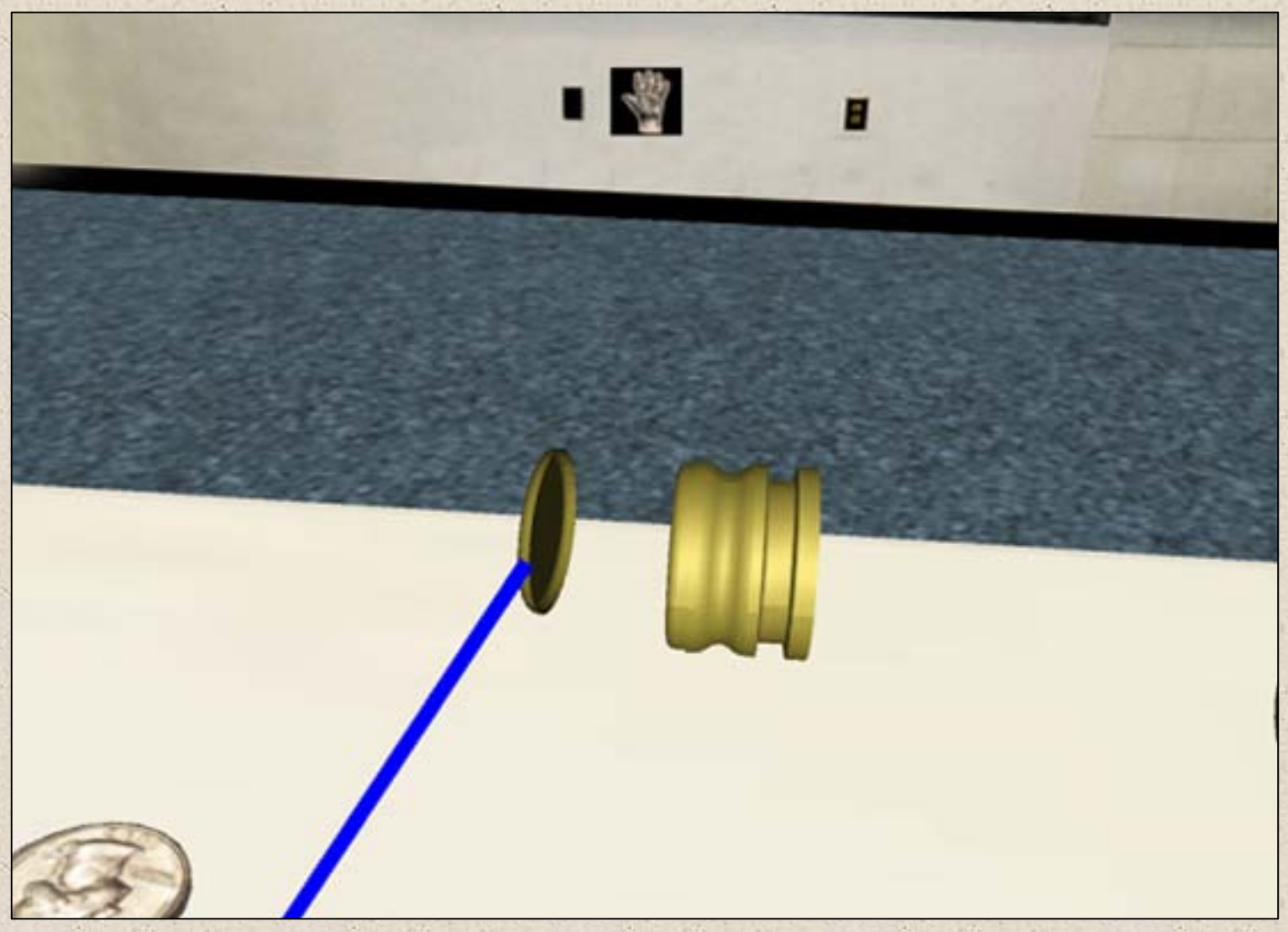

Figure 13: Small cap must be attached to the side of the nozzle with a relief.

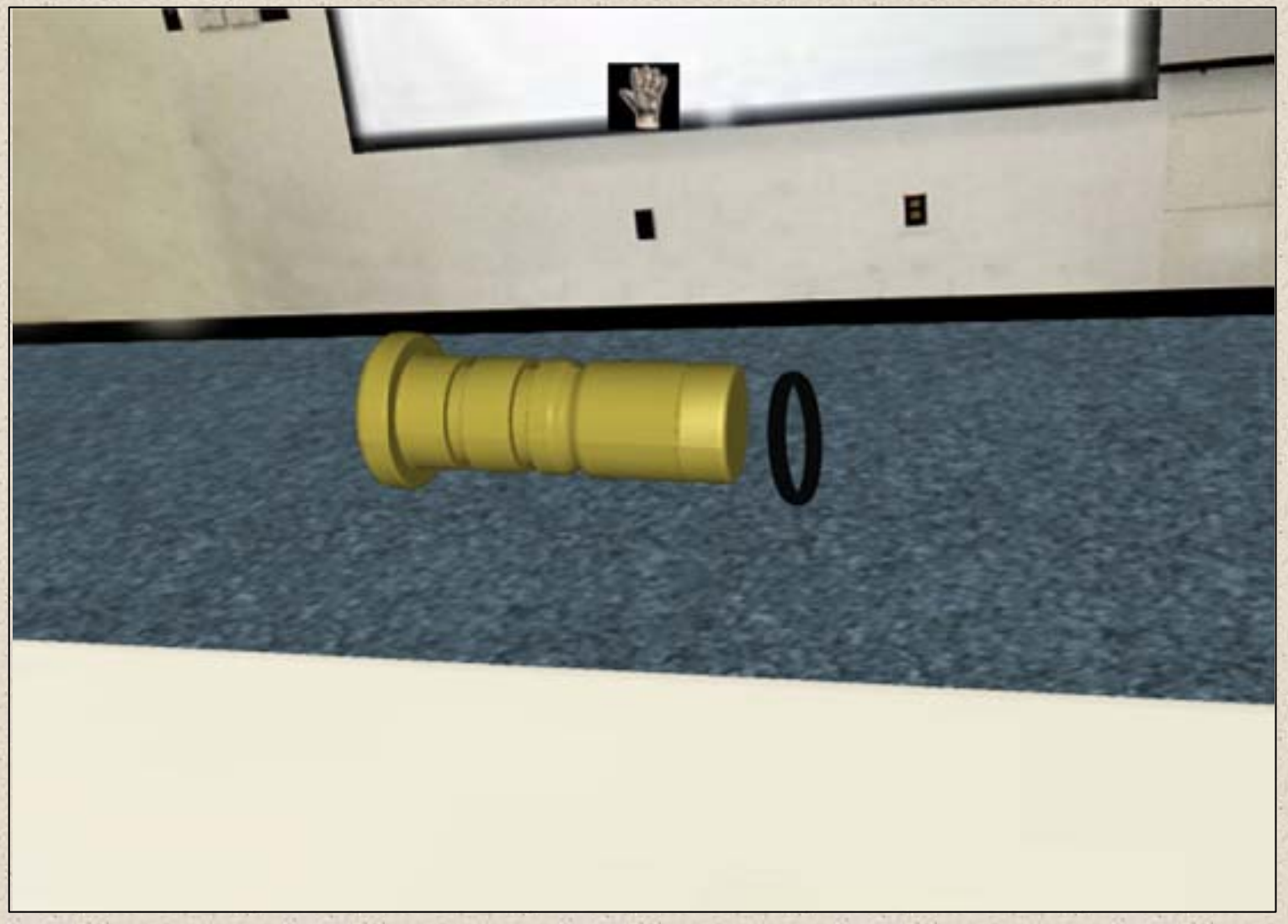

Figure 14: Rubber o-ring must be rolled on top of the rightmost rectangular groove.

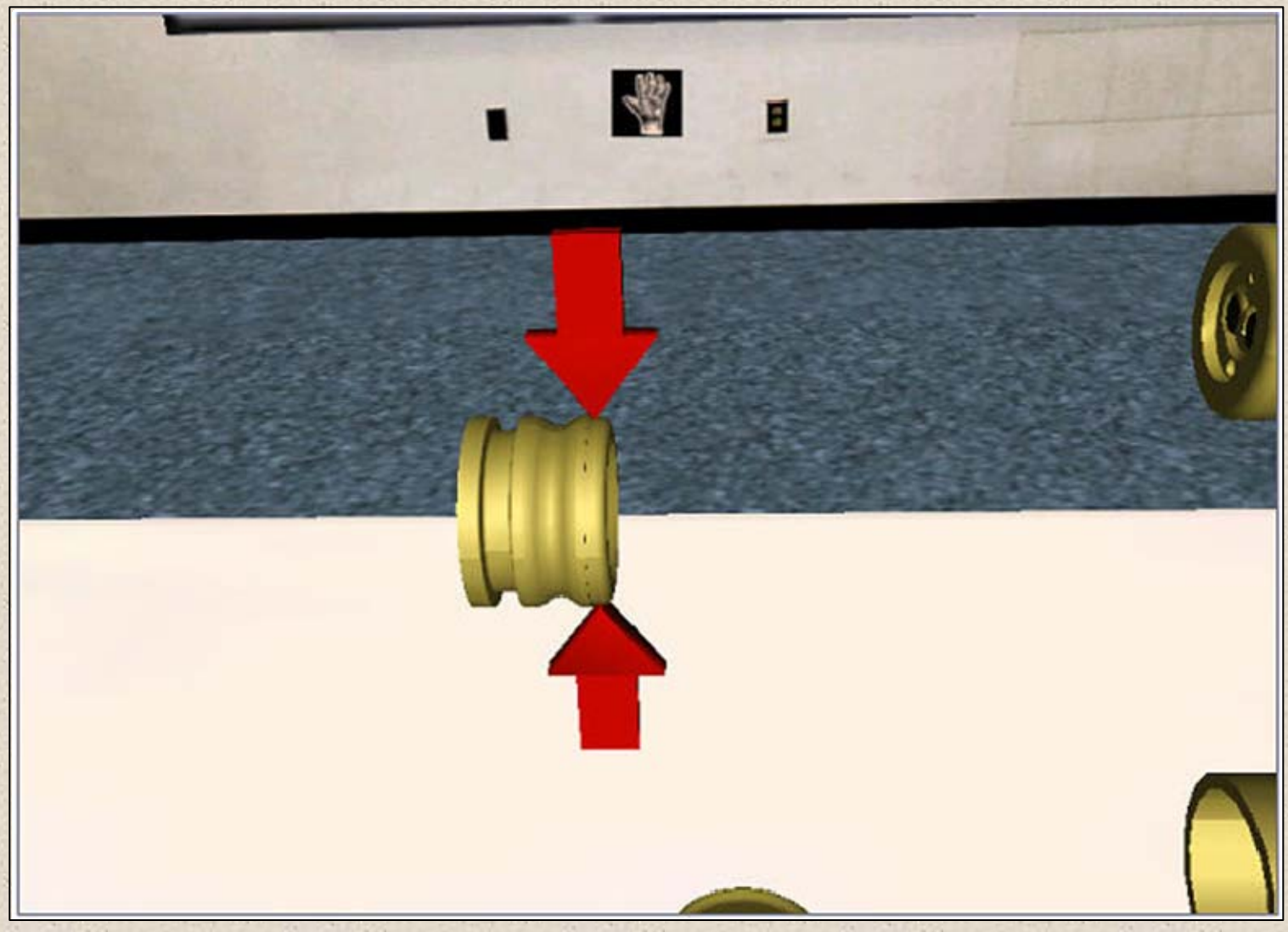

Figure 15: Detail in the form of flashing arrows is added to animation of small cap attachment to nozzle.