

3D PRINTED DIAGNOSTIC SOCKET - IN CLINIC REINFORCEMENT

SHUTTLE LOCK SUSPENSION

- Surface Preparation: Rough up exterior distal half using sanding cone on Trautman multi-speed sanding machine
- Assembly: Insert bulldog attachment, assemble pyramid, tube clamps, pylon, and foot
- Installation: Screw components onto socket with bench alignment verification
- Reinforcement: Wrap distal end with 3-4 layers of fiberglass covering bottom half and pyramid
- Curing: Allow fiberglass to cure until dry to touch

ANATOMICAL/SUCTION/VACUUM SUSPENSION

- Surface Preparation: Rough up exterior distal half using sanding cone on Trautman multi-speed sanding machine. Rough the surface of the 4 hole plate
- Base Plate: Epoxy 4-hole plate to the socket's distal end
- Reinforcement: Wrap 3-4 layers of fiberglass around distal end and 4-hole plate
- Sufficient attention should be given to wrap fiberglass around aspects of the plate with adequate material for purchase in the grooves
- Curing: Allow fiberglass to cure until dry to touch
- It is not recommended to use low profile plates outside the bars

SHARED BEST PRACTICES

- Proper surface roughening improves adhesion and reinforcement
- 3-4 layers of fiberglass wrapping provides consistent structural support
- Full curing before use is essential
- Distal end reinforcement is critical for both socket types
- Note any extreme undercuts of socket shape, areas that have been heated, or offset nature of 4 hole plates. It is recommended have extra reinforcement due to additional stress risers in those unusual geometries
- For patients over 250 lbs, rough areas of the entire socket and then wrap the entire socket with fiberglass and use caution
- It is not recommended for 3D printed diagnostic sockets to leave the clinic
- It is recommended for 3D printed diagnostic sockets to be tested under supervision