We recommend the brush ride perpendicular to the shaft. The track in which the brush rides on the shaft should be free of scratches, nicks, dents, or defects of any kind. Ideally the shaft surface should be clean with a surface finish within the standard range of most motor manufacturers of 8 to 63 RMS. Do not use any external lubrication. The brush will supply its own extreme lubrication.

**Option 1**

Use two 10-32 socket head cap screws to mount the BPK-S unit. The holders should be mounted 0.090” to 0.125” (2.3 mm to 3.2 mm) from the shaft. Mounting dimensions are given in the diagram below. The brush retainer clip can be used as a guide for proper spacing above the shaft.

Once the holder is installed remove the Brush Retainer Clip used to hold the brush in place. Connect one end of the supplied ground wire to the terminal and the other end to ground.

**Option 2**

**Caution:** When mounting Helwig Carbon Products, Inc. Bearing Protector Kits using Dual Lock avoid painted surfaces while securing the holder to the motor.

1. Remove liner from adhesive and place 3M™ Dual Lock™ onto **Brush Holder**
   a. See page 2 for recommendations for pressure sensitive adhesive
2. **Position** the brush holder so that the brush is perpendicular to the shaft and the bottom of the brush holder is 0.090” to 0.125” (2.3 mm to 3.2 mm) from the shaft.

3. **Mark** the position of the 3M™ Dual Lock™ on the unit.

4. **Remove** liner from adhesive and place 3M™ Dual Lock™ onto unit.

5. **Push holder** onto unit. Make sure 3M™ Dual Lock™ is securely fastened.

6. **Remove** the Brush Retainer Clip.

7. **Connect** one end of the supplied ground strap to the terminal and the other end to ground.

**3M™ Dual Lock™ Pressure Sensitive Adhesive attachment:**

The fasteners and substrate surfaces should have equilibrated for a minimum of 1 hour at temperatures of 68°F (20°C) or greater before application. Generally these adhesive backed fasteners should be applied to surfaces that are smooth, dry and free of oils, mold, release agents or other surface contaminants.

The substrate surface should be cleaned to remove any surface contaminants with an appropriate cleaning method for the customer's substrate, type and quantity of surface contaminants that need to be removed. Note: Be sure to follow all government regulations and the manufacturer's precautions and directions for use when using solvents or other cleaning methods.

After the substrate has been cleaned and dried, the liner is removed from the fastener's adhesive and without touching the adhesive, the fastener's adhesive is applied to the surface using light finger pressure. The fastener can then be rolled down, to increase contact of the adhesive with the substrate's surface. Extra care must be exercised when rolling down 3M™ Dual Lock™ Reclosable Fasteners to prevent bending of the stems which can compromise the closure strength.

Adhesive bond strength increases with time, pressure and temperature. A minimum of one hour dwell is recommended before applying a load or disengaging assembled parts. Recommended time to achieve maximum bond strength is 24 hours.

For more information go to 3M’s website for Dual Lock™.