

## X-10 Lock Installation without using the Spindle Alignment Tool

This instruction is provided to help prevent the certified X-10 installer from cutting the X-10 spindle too short during the installation when the installer does not have the X-10 spindle alignment tool. **We recommend that you use the X-10 spindle alignment tool whenever possible.** If you have questions regarding this procedure call the DoD Lock Program Technical Support Hotline at 800-290-7607.

**Step 1:** Position the spindle so the square end tip enters the dial ring. Seat the spindle fully into the drive cam by slowly turning it (see figures 1 and 2). You should feel it “catch” twice as you push it in.



Figure 1



Figure 2

**Step 2:** Hold the spindle in place and thread the spindle screw that comes with the installation kit into the back of the spindle (through the back of the lock) and turn at least 8 complete revolutions of the screwdriver (see figure 3). **If the screw is tight after 3 or 4 revolutions (or less than 8) then the spindle is not seated properly into the drive cam.** This will eventually cause the dial, hub, and spindle assembly to disengage from the drive cam and the lock will not function properly.

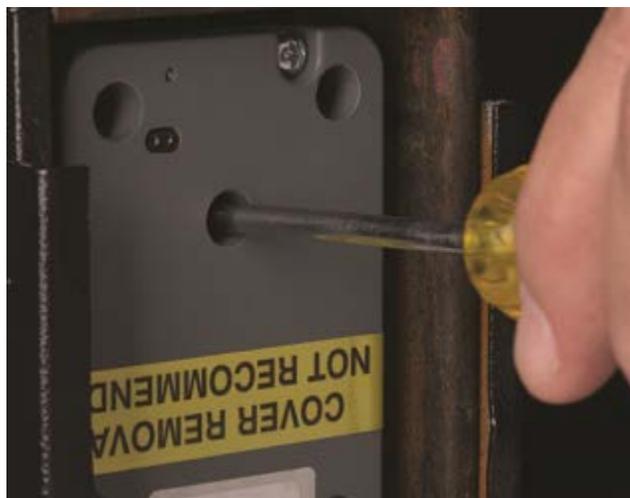


Figure 3

**Step 3:** Place the hub on the spindle so it is flush with the dial ring cover. Tighten the hub onto the spindle using an Allen wrench (see figure 4). Then, using a hacksaw, cut off the excess spindle evenly with the end of the hub (see figure 5).



Figure 4



Figure 5

**Step 4:** Loosen the setscrews on the dial hub and remove the dial hub to apply lubricant to the bearing surfaces. Make a bend in the dial hub locating gauge (shim) at its midpoint. Place dial hub back onto spindle, then place shim between the dial hub and the bushing in the dial ring cover and tighten the hub onto the spindle, then remove the shim (Figures 6 and 7).



Figure 6



Figure 7

**Step 5:** Before putting the dial onto the lock case, dial the combination (using the hub) several times to confirm the X-10 lock is working properly (Figure 8). Without the dial attached to the hub, it ensures less trouble disassembling the lock should there be a problem with the installation.



Figure 8

**Step 6:** Cover the retaining ring with equal amounts of lubricant, and center the ring so that it is positioned equally around the dial hub.

**Step 7:** Ensure the dial's 5-sided flat spring is fully recessed in the dial and spring gap is aligned with the internal key and the dial. Snap the dial onto the lock case making sure the dial cannot be pulled off.

**Step 8:** Dial the combination a few times to confirm the X-10 lock is working properly (figure 9).



Figure 9