

## X-10 Lock Installation Using the Spindle Alignment Tool

The X-10 Spindle alignment tool helps prevent the certified X-10 installer from cutting the X-10 spindle too short during the installation. If the spindle is cut too short, it will eventually cause the dial, hub, and spindle assembly to disengage from the drive cam and the lock will not function properly. To purchase this tool, call Lockmasters, Inc. at 800-654-0637 and ask for part number LKMX10SMT. 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 (see figures 1 and 2).



Figure 1



Figure 2

**Step 2:** Hold the spindle in place and thread the spindle alignment tool into the back of the spindle (through the back of the lock) until tight (see figure 3). Note that if the spindle is not seated properly into the drive cam, the spindle alignment tool will not thread into the spindle. When seated properly, you will not be able to remove the spindle.



Figure 3

**NOTE:** Steps 3, 4 and 5 differ from the X-10 Spindle Alignment Tool video on the DoD Lock Program website.

**Step 3:** Place the hub on the spindle so it is flush with the lock case. Tighten the hub onto the spindle using an Allen wrench.

**Step 4:** Using a hacksaw, cut off the excess spindle evenly with the end of the hub (see figure 4).



Figure 4

**Step 5:** Loosen the hub screw and put the shim behind the hub. Push the hub against the shim and tighten onto the spindle again. Remove the shim (see figures 5 and 6).



Figure 5



Figure 6

**Step 6:** 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. Without the dial attached to the hub, it ensures less trouble disassembling the lock should there be a problem with the installation.

**Step 7:** Snap the dial onto the lock case making sure the dial cannot be pulled off (see figure 7).



Figure 7

**Step 8:** Remove the spindle alignment tool and replace with the spindle screw that comes with the installation kit (see figures 8 and 9).



Figure 8



Figure 9