M2-Stuck Cartridge Removal

**Suggested Method To Remove A Stuck Cartridge**

**The Use Of The Cartridge Puller To Remove Stuck Cartridge:**

1. Make sure both water supplies are turned OFF.
2. Disassemble the faucet and remove cartridge retainer clip.
3. Pull out the cartridge stem to the full open position.
4. Unscrew the knurled screw until it backs out of the recess in the puller, as show.

**Directions To Remove Cartridge Shell With Stem Completely Removed:**

1. Screw a 1/2"-13 (N.C) or 1/2"-20 (N.F.) tap into the inside of the cartridge shell. During this operation the tap will cut threads on the inside of the shell. Remove the tap.
2. Cut a 3/8" hardwood dowel 1-3/4" long and drop it...
5. The hex out should be unscrewed so that at least one thread is visible at the bottom.

6. Set the tool on the cartridge. Fit the ears on the tool between the ears of the cartridge.

7. By hand, screw the knurled screw down into the cartridge stem. Turn it until it stops.

8. Screw the hex nut down until it stops on the valve.

9. Twist handle by hand. Try to turn and rotate the cartridge in the body. If it still will not pull, then proceed as in Step 10.

10. Hold the tee handle from turning and tighten the hex nut with a wrench for two full turns. The cartridge can now be pulled out of the valve body.

3. Re-thread the tap into the shell. It will bottom on the end of the hardwood dowel. Keep screwing the tap against the dowel and the cartridge shell will be forced out.

4. It may be necessary to hold the ears of the cartridge shell against rotation by using the ends of the cartridge clip or a small screwdriver blade as shown above.

5. The dowel can be flushed out. Do not use metal since its removal would be a problem.