

Drill Tap Demonstration

Materials

- Safety Glasses
- Drop cloth
- Electrical panel box with a wall thickness of .060 to .090"
- Jaw horse (clamping saw horse)
- Variable speed cordless drill (example: DeWalt, Milwaukee, Bosch) or cordless impact with 1/4" quick connect chuck
- Drill tap bit(sizes 6-32, 8-32, 10-24, 10-32, 12-24 and 1/4-20)
- Wear appropriate work clothing and shoes as needed
- Wear a cap to keep long hair away from moving drill

Setup

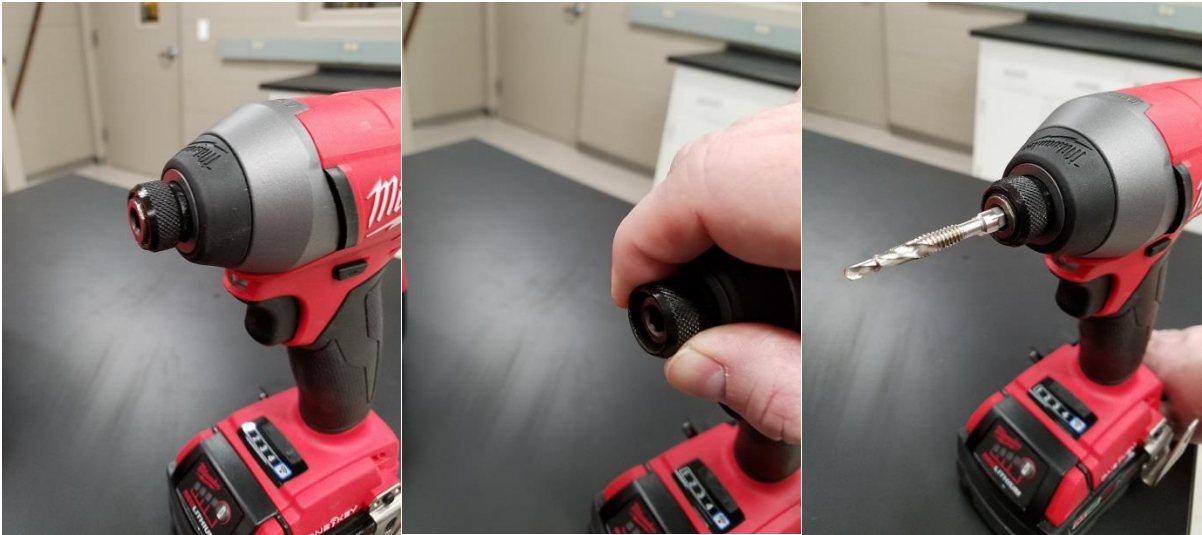
1. Lay drop cloth down as a barrier to prevent metal shavings from falling on and damaging the floor. (Also makes cleanup much quicker).
2. Set up jaw horse on top of drop cloth.
3. For demonstration, secure panel box in the jaws of the jaw horse.



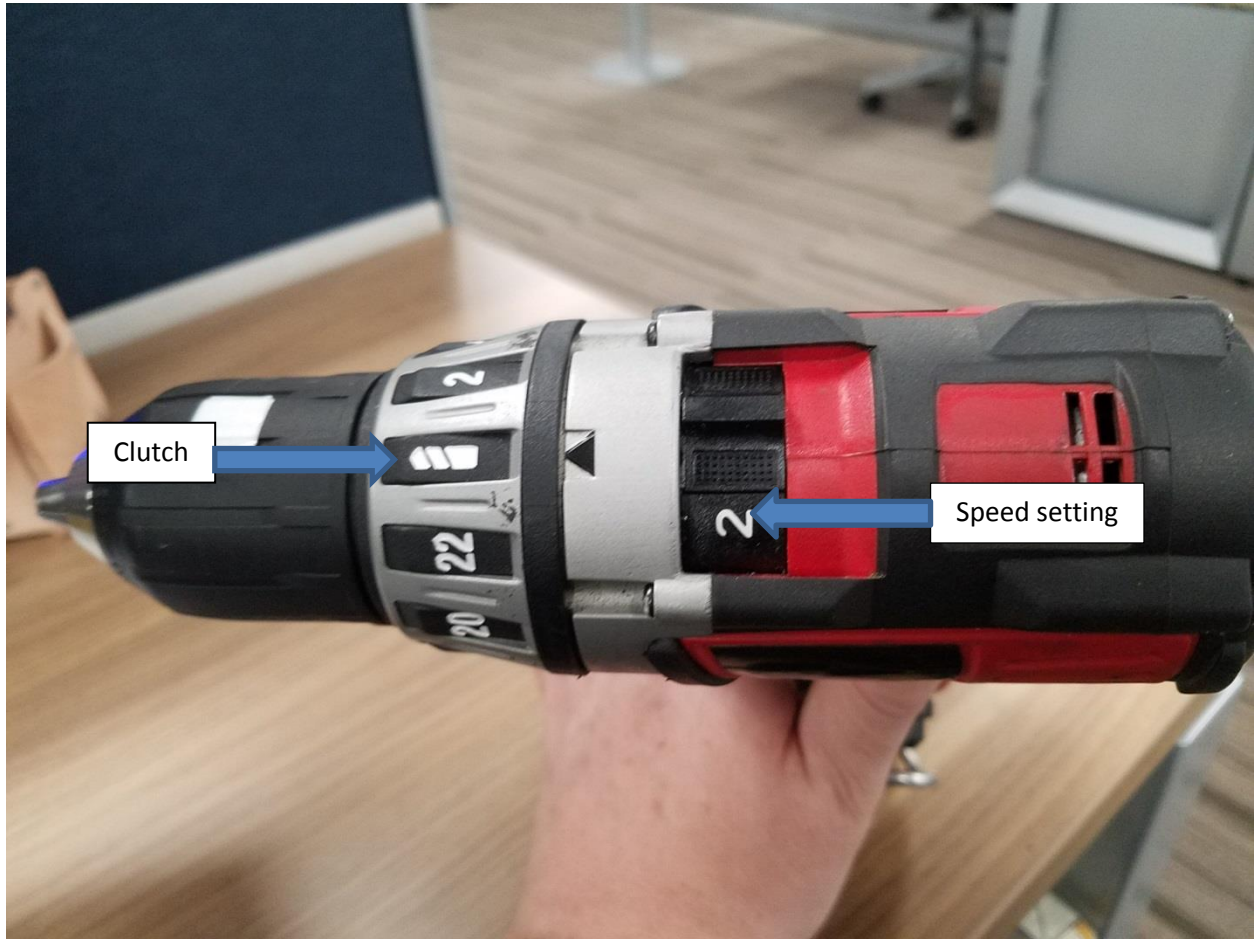
4. Open chuck on variable speed drill large enough to allow the hex shank to fit into the chuck. Once the shank is inserted, tighten the chuck on the drill.



5. For cordless impact, pull collet out and hold while inserting drill tap bit. When drill tap bit is full inserted into the chuck, release collet to secure bit.



6. Setting up the cordless drill for drill tap bit: Set the speed setting to the high speed /low torque setting on the drill (Setting 2 on most popular drills) and make sure the clutch is turned to the drill setting.



Operation

1. Orient drill tap bit 90° to the work surface. Keep the drill as vertical as possible.



2. Run drill tap at a full speed throughout the drilling and tapping portions of the bit. **Reducing speed mid-cut increases the possibility of a jam and ultimately bit failure.**
3. Once the drill tap threads have cut through the work piece, allow the countersink (located after the back taper that follows the threads) to deburr the hole.



4. To remove the drill tap and reverse the bit out of the hole, pull up on the drill to allow the tapping threads to contact the bottom of the drilled hole. Then, slowly reverse the bit through the hole, making sure to keep the drill tap vertical.



Tips:

- Use only with cordless drill or impact driver. Do not use with corded drills.
- Make sure to use a fully charged battery.
- Keep a tight grip on the drill at all times, especially as the bit transitions from drilling to tapping. Due to the high amount of torque needed for this stage of the process, the drill could have the tendency to twist away from the user.