



Pole Repair Kit Installation Guide

Follow these steps to install the Pole Repair Kit on 4 or 5 inch, round or square straight poles.

1. Prepare the Pole.
 - a. Remove any existing base cover over the anchor bolts.
 - b. Remove debris from the base plate, anchor bolts, and footing.
 - c. Ensure water can drain from inside the pole.
 - i. Check under the base plate for dry packed concrete, and remove as much of it as you can.
 - d. We recommend removing any flaking rust and paint the pole base, inside and out, with a rust encapsulating paint like [The Rust Doctor](#).
2. Prepare the Pole Repair Kit.
 - a. Ensure that the Pole Repair Kit fits your pole.
 - b. Double check that your thread extenders match the anchor bolt thread.
 - c. Set the Pole Repair Kit over the base plate of the pole to ensure that the anchor bolts align inside the anchor bolt holes of the pole repair kit.
 - d. Be sure to confirm that the hand hole lines up with the open side of the Pole Repair Kit.
 - i. As long as the hand hole is centered between (2) anchor bolts, and not centered on (1) anchor bolt, this will not be a problem.

Now Install the Pole Repair Kit.

1. Replace the anchor nuts with the thread extenders.
 - a. Remove (1) anchor nut and washer.
 - i. If the nut cannot be removed conventionally, these steps may free it:
 1. Soak threads in penetrating oil the day before installation.
 2. Using a small torch, heat the nuts. This can break the corrosion bond and free the nut.
 - ii. If the nut is still not free, an experienced metal worker can cut the nuts off without damaging the anchor bolt threads.
 - b. Using the correct die, chase the threads to ensure they are clean and free from imperfections.
 - c. Install a new washer and thread extender on that (1) exposed anchor bolt.
 - i. The anchor bolt threads must engage the thread extender at least the width of the anchor bolt.
 1. Example: a $\frac{3}{4}$ " bolt must engage with at least $\frac{3}{4}$ " of thread; a 1" inch bolt must engage with 1" of thread.
 - ii. The anchor bolt must also be no taller, (measured above new washer) than $\frac{1}{2}$ of the height of the thread extender nut.
 1. This will prevent the thread extender from bottoming out on the anchor bolt and ensures the existing base plate is held tight.
 2. The anchor bolt can be cut with a sawzall or band saw.
 - d. Tighten the thread extenders to the proper torque for the bolt size.



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- e. Installation and tightening of the thread extender must be complete before moving to the next step.
- f. Repeat steps 1.a-e for the remaining anchor nuts, completing step (c) for each, before moving on to the next anchor nut.
2. Install (4) washers on each of the thread extenders.
3. Place the Pole Repair Kit on the thread extenders and washers.
 - a. Be sure to line the open side of the Pole Repair Kit up with hand hole on the pole.
 - i. This will ensure a secure fit and allow future access to the hand hole.
4. Install (4) washers on each of the thread extenders above the base of the Pole Repair Kit.
5. Install (4) new nuts on the thread extenders, so the nuts seat on the new washers.
 - a. Seat the nuts by hand.
6. Check the fit of the Pole Repair Kit.
 - a. Check that the Pole Repair Kit is sitting flush on the (4) thread extender washers.
 - b. The Pole Repair Kit should be square and plumb with the pole.
 - c. The inside of the Pole Repair Kit should be flush with the back of the pole.
7. Tighten the nuts to the proper torque for the bolt size.
8. Recheck the fit around the Pole Repair Kit.
 - a. Check that the Pole Repair Kit is sitting flush on the (4) thread extender washers.
 - b. The Pole Repair Kit should be square and plumb with the pole.
 - c. The inside of the Pole Repair Kit should be flush with the back of the pole.
9. Drill the rear 13/16" holes (2 holes on 4 inch units and 3 holes on 5 inch and larger units) in the pole using the Pole Repair Kit as a template.
 - a. We recommend using a Carbide tipped hole saw bit in a 120V hand held drill.
 - i. The bit we recommend is a [Champion CT7-13/16 Carbide Tipped Hole Cutter 1" depth](#).
 1. The centering bit is not needed and should be removed to prevent damaging the wires inside the pole.
 - ii. An 18V, or similar, battery powered drill will suffice if 120V power is not available.
 - b. Use a supple amount of cutting/cooling fluid.
 - i. This will preserve your bit and make cutting easier.
 - ii. We recommend [Lenox Band-Ade® Sawing Fluid](#) mixed in a spray bottle.
 - c. Apply pressure to cut the holes.
 - i. If the drill is grabbing and twisting, you are applying too much pressure and will wear out your bit.
10. Install the (2 on 4 inch units and 3 on 5 inch and larger units) rear box bolts.
 - a. Hold the outer box bolt case secure with a 1" wrench.
 - b. Tighten the inner bolt to 59 foot-pounds using a 6-point socket.
 - i. The inner bolt head will break off at the correct torque of (59) fifty-nine foot-pounds.



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- ii. Use a battery impact gun to tighten the inner bolt with a short, 6-point socket and no extension.
 1. Avoid rocking the bolt, as this can cause the head to fail prematurely,
 2. Most impacts are not strong enough to reach 59 foot pounds.
- iii. Use a breaker bar and the same short 6-point socket with no extension to tighten the inner bolt, until the head breaks off at 59 foot pounds.
 1. Avoid rocking the bolt, as this can cause the head to fail prematurely,
11. Drill the remaining 13/16" holes (4 holes on 4 inch units and 6 holes on 5 inch and larger units) on the sides of the pole, using the Pole Repair Kit as a template.
 - a. See step 9 for details.
12. Install the (4 on 4 inch units and 6 on 5 inch and larger units) remaining box bolts.
 - a. See step 10 for details.
13. Recheck all your connections to ensure everything is tight and secure.
14. Your Pole Repair Kit is now installed and your pole's structural integrity is restored.

We recommend installing of a [Cone Base Cover](#) to protect the Pole Repair Kit, pole base, and footing. The Cone Base Cover will also protect the public against the dangers of a pole repair and hardware.