

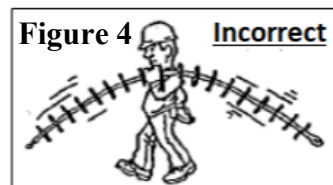
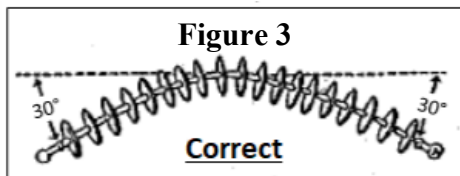
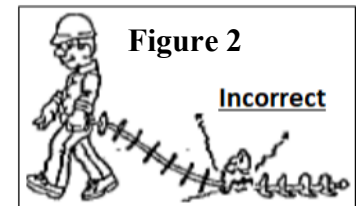
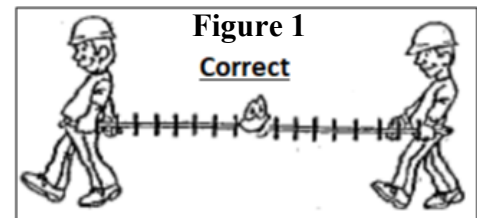
Part 1 - Receiving, Unpacking, and Storage

1. Notify NGK-LOCKE immediately if there is damage to the shipping container.
2. When using a forklift to unload the containers, avoid damaging the crates.
3. Carefully unpack and inspect insulators prior to installation. Insulators with torn or ripped shed/sheath, or worn sheath, or exposed rod should not be used.
4. Notify NGK-LOCKE if there is damage to the insulator(s) at the time of receipt and/or unpacking.
5. Insulator storage areas should be free from oils and/or petroleum derivatives. Store the insulators in a dry, cool and well-vented area, so they stay free from mold.
6. When unpacking, place the insulators on a flat surface that uniformly supports the entire length. Insulators shouldn't be stored that way for an extended period of time.
7. Install insulators ASAP to prevent contamination, mold growth, rodent damage and shed deformation. Storing insulators outside is not recommended.
8. If sheds are slightly deformed, they can be corrected by hand.

Polymer Insulator Handling Guidelines and Disposal

Part 2 - Transportation and Field Handling

1. Do NOT throw hardware or heavy tools on top of insulator(s).
2. If possible, use the original crate(s) to transport insulators. If not, secure insulators to minimize excessive motion during transport. When securing the insulators, avoid contact with the silicone housing and sheds; secure using the end-fittings.
3. When unpacking, Do NOT lift the insulator by the polymer weather sheds.
4. Carry long suspension insulators (over 3 meters (10 foot)) at BOTH ENDS with two people (Figure 1). Do NOT drag insulators on the ground (Figure 2).
5. Do NOT allow the insulator to bend in excess of 30 degrees (Figures 3 and 4). Excessive bending may damage the rod, especially on long insulators (over 3 meters (10 foot)); this type of damage may not be visible.



Part 3 - Insulator Cleaning

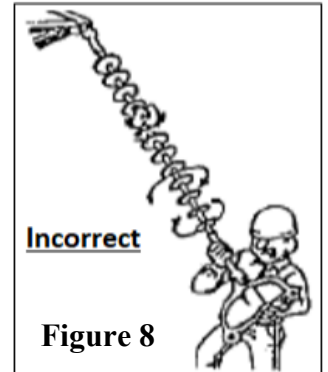
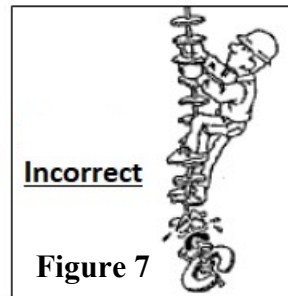
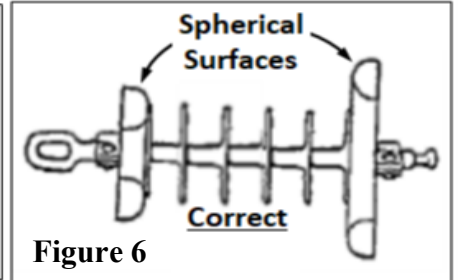
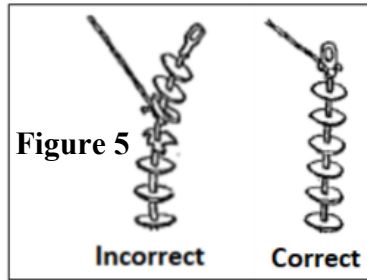
1. If the Insulator is dirty, clean it with plain water and wipe dry with a soft cloth prior to installation.
2. Do NOT use solvents, oil-based or abrasive materials to clean insulators.

Part 4 - Field Installation

1. When hoisting polymer insulators, do NOT tie the rope directly to polymer housing. Tie the rope to the End-Fitting (Figure 5).
2. Inspect the corona ring surface prior to installation. Damage such as deep scratches and sharp protrusion should be removed to avoid corona discharge.

For Corona Ring Installation, follow the NGK-LOCKE Drawing and Instructions. Every Corona Ring, no matter at line side or ground side, should be installed so that the SPHERE SURFACE ALWAYS FACES THE RUBBER HOUSING (Figure 6).

3. N-L does NOT recommend people to climb or ride on a Polymer Insulator at any time (Figure 7).
4. Do NOT step on installed corona rings, hang ropes or fixtures on installed corona rings, this can cause the corona ring to loosen and/or corona ring surface damage.
5. Polymer Suspension Insulators have limited torsion strength and bending strength, AVOID applying excessive torsion or bending stress.
6. Do NOT Twist and/or Rotate a Locked or Loaded Insulator, e.g. during Stringing (Figure 8).
7. After installation, all lock washers for fasteners should be checked and confirmed they are flat.



Part 5 – Environmental

Disposal of packaging material

Although all packaging material is nonhazardous and may be disposed of as general trash (landfill), we ask that you consider repurposing or recycling wherever possible. Please refer to applicable state and local regulations regarding disposal of packaging materials.

Disposal of polymer insulators

Polymer insulators are comprised of nonhazardous materials that may be recycled. The silicone polymer housing and fiberglass core are difficult to recycle and may have to be disposed of as general trash. Aluminum corona rings and ferrous metal components* are recyclable. The ferrous metal end fittings should be cut off the insulator leaving minimal core protruding from the end fitting**; the remaining core will be burnt off during smelting. Please consult local and state regulations prior to disposing of polymer insulators and insulator components for applicable disposal regulations.

* Notify your metal recycler that ferrous insulator components are galvanized with zinc.

** Cutting the fiberglass core produces nuisance dust that may cause temporary irritation to the skin and eyes; safety glasses with side shields, gloves and long sleeves should be worn during cutting.

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