

Installation Instructions

for OPGW and ADSS Double Layer Formed Wire Suspension (OSU and ASU)



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Description

The AFL Double Layer Formed Wire Suspension unit is an aerial support for OPGW and ADSS lines.

The unit includes two halves of the suspension body, two neoprene insert halves, a suspension strap, hex bolt, lock washer, nut and cotter pin, a set of inner rods, and a set of outer rods for complete assembly (**Figure 1**).

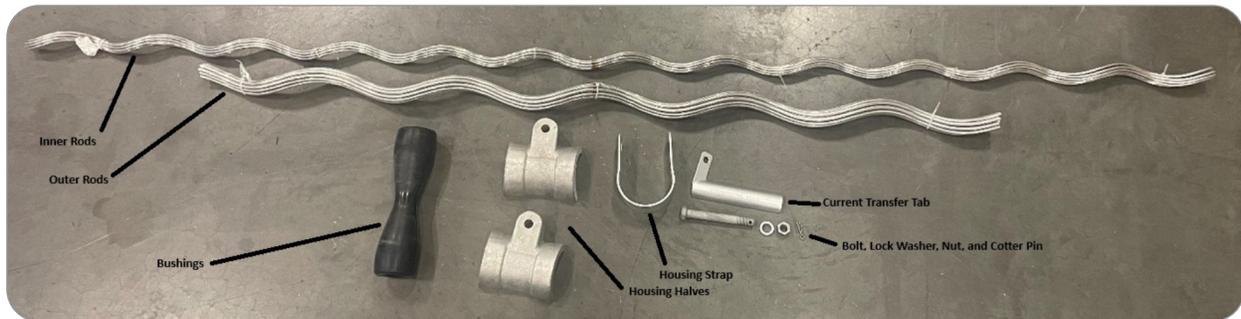


Figure 1 — OPGW and ADSS Formed Wire Suspension Components

Preparation of OPGW and ADSS

1. Plumb and mark the OPGW or ADSS at the center of the attachment point using a felt maker or lumber crayon (**Figure 2**). Do not scratch the cable.



Figure 2 — Center mark application

Applying the Inner Rods

1. Align the factory-marked centerline of the first inner rod to the marked installation line of the OPGW or ADSS (**Figure 3**).
2. Wrap the first rod, leaving 10" to 14" of each end loose, which allows for a check to ensure that the remaining rods will not shift during this step of the installation.
3. Repeat to remaining rods. Confirm rods do not cross over one another throughout this process. When most of these rods are applied and there are few gaps remaining, the remaining rods will push between the installed rods. This gives the OPGW or ADSS its strong, armored layer.
4. **NOTE:** Make sure to have ends of rods aligned within 2". If ends exceed this limit, remove and reinstall.
5. To finish installing inner rods, use both hands to wrap inner rods simultaneously (**Figure 4**), wrapping one end at a time, until rods are in position.



Figure 3 — Aligning first inner rod



Figure 4 — Wrapping ends of inner rods

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Applying the Insert and Current Transfer Tab

1. Center the halves of the insert at the mark on the conductor. Position the halves so that the flat faces are horizontal (**Figure 5**).
2. Once neoprene inserts are centered, fasten with a thin layer of tape.
3. Place the current transfer tab on the inner rods with the short leg of the tab touching the edge of the insert (**Figure 6**). (Omit this step for ADSS suspension installations along with other current transfer tab steps.)



Figure 5 — Aligning insert halves



Figure 6 — Installed current transfer tab

Applying the Outer Rods

1. Center one outer suspension rod on the left or right of the insert with the center marks aligned. Make sure the rod follows the contour of the insert.
2. **CAUTION:** Improper Installation — DO NOT wrap the rod around insert as shown in **Figure 7**.
3. Apply two or three complete wraps of the suspension rod beyond each end of the insert. Over the contour of the insert, there should be no space between the rod and insert.
4. As shown in **Figure 8**, repeat Steps 1 and 3 above so that four rods are placed around the insert at each quadrant (i.e. 3, 6, 9 and 12 o'clock positions).
5. Apply all remaining rods of the suspension, making sure all rods are evenly spaced and do not overlap (**Figure 9**).
6. Use both hands to twist rod ends into position simultaneously, doing one end at a time. Make sure insert is still upright.



Figure 7 — Improper rod installation



Figure 8 — Four outer rods installed

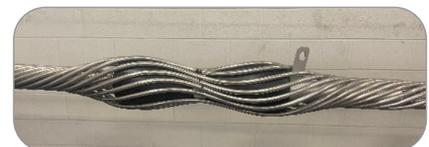


Figure 9 — All outer rods installed

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Applying the Suspension Body

1. Place the two halves of the suspension body around the "caged" insert at the assembly's center.
2. Place the suspension strap around the two halves from the bottom and tap into place, ensuring the holes are aligned with the bolt holes of the suspension body (**Figure 10**).
3. Align attachment hardware (not depicted) hole with housing and strap holes and insert bolt through holes.
4. Apply the lock washer, nut and cotter pin on bolt of suspension and tighten the bolt until lock washer is collapsed (**Figure 11**). DO NOT overtighten bolt.
5. Final assembly is shown in **Figure 12**.

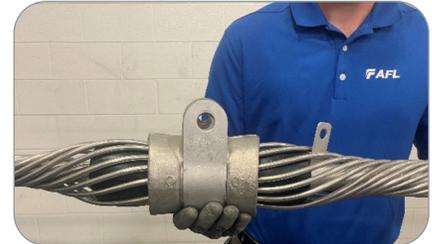


Figure 10 — Strap and housing applied



Figure 11 — Tightening bolt with wrench



Figure 12 — Final assembly