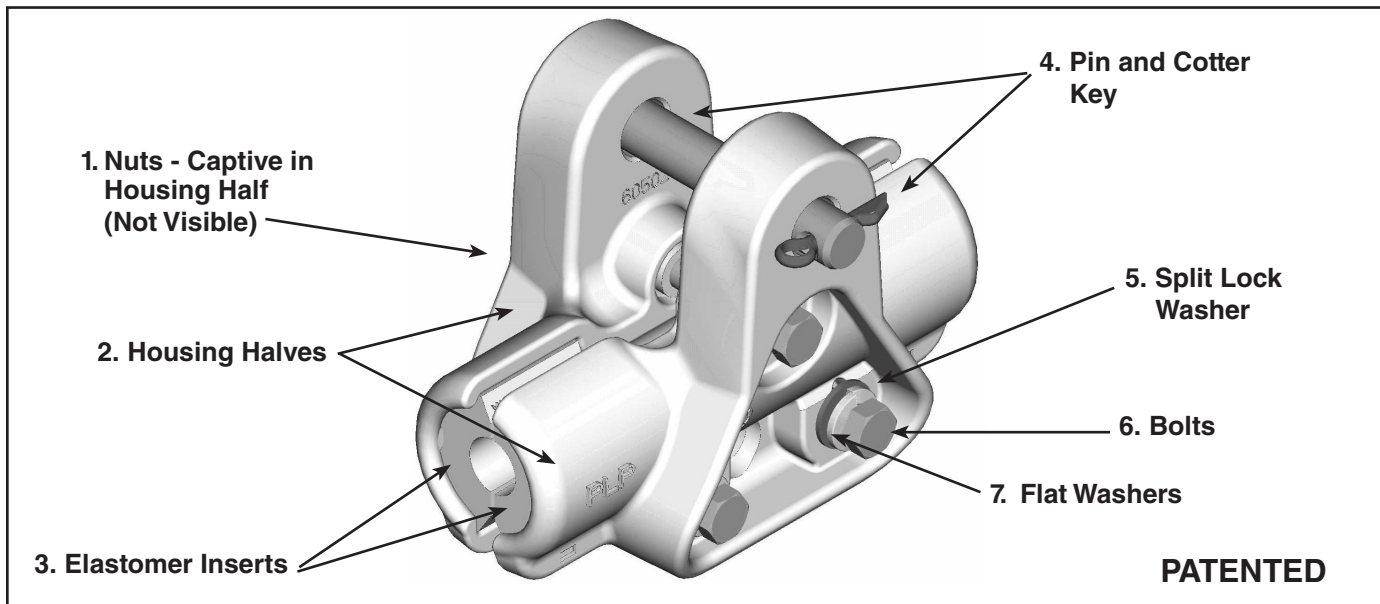




CUSHION-GRIP® Suspension

Be sure to read and completely understand this procedure before applying product. Be sure to select the proper PREFORMED™ product before application.



NOMENCLATURE

- | | |
|---|-----------------------------|
| 1. Nuts (Captive in Housing Half) | 4. Pin and Cotter Key |
| 2. Housing Half (2 each) | 5. Split Lock Washers - (3) |
| 3. Elastomer Inserts (2 per housing half) | 6. Bolts - (3) |
| | 7. Flat Washers - (3) |

APPLICATION

Step #1 Plumb suspension and mark the conductor where the center of the clamp will fall using a felt pen or lumber crayon. Do not notch conductor strands. **Be sure that the conductor surface that will be within the CGS is free from dirt or oxidation. Wire brush clean, if required. This is especially important if the CGS is installed on an existing conductor.** Remove the pin and cotter key, or bolt, nut and cotter key.

Step #2 Completely disengage the top bolt of the clamp assembly from its nut. Note that this bolt is held captive using a small rubber O-ring.

Step #3 Loosen the bottom two bolts making sure not to back them completely out of their respective nut. This will permit the clamp to pivot open on these bottom two bolts. If the bolts are not completely loosened, installation of the clamp on the largest conductor in the clamp range may be difficult.

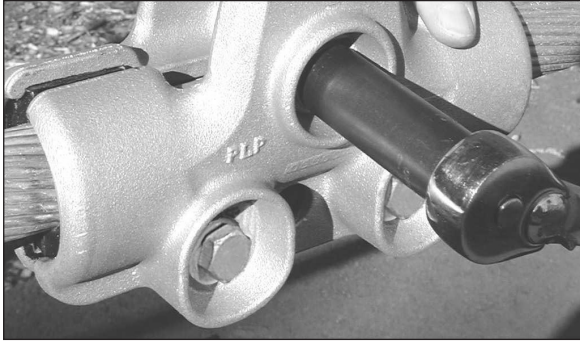
Step #4 Place the clamp on the conductor, lining up the suspension pinholes with the mark made on the conductor and the structure connection point. Push in the top bolt to engage it in the captured nut in the opposite housing half. Tighten by hand until snug.



Install the clamp on the conductor.

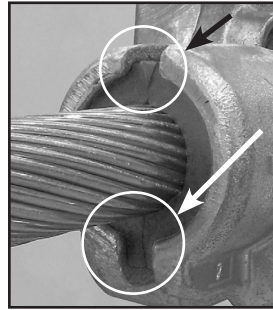
PLP Tip: For extremely corrosive coastal environments, applying a liberal amount of a conductive oxide inhibitor on the conductor within the CUSHION-GRIP® Suspension, will minimize the possibility of build-up of corrosive contaminants.

Step #5 Tighten all three bolts with a ratchet wrench keeping the housing halves parallel (i.e., equal gaps between housing halves on top and bottom).

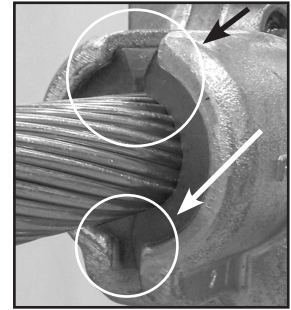


Clamp Range Inches (mm)	Bolt Torque
0.312 - 0.608 (7.9 - 15.4)	15 ft-lbs (21 Nm)
0.609 - 0.883 (15.5 - 22.4)	25 ft-lbs (34 Nm)
0.884 - 1.196 (22.5 - 30.4)	40 ft-lbs (55 Nm)
1.197 - 1.545 (30.4 - 39.2)	40 ft-lbs (55 Nm)
1.546 - 2.052 (39.3 - 52.1)	60 ft-lbs (82 Nm)

Tightening of the bolts should be completed in a circular pattern. When tightening with the torque wrench, start with the top bolt and only partially tighten the top bolt. Then move to the second and third bolts (bottom bolts) and partially tighten to assure an equal gap between housing halves. This should be repeated several times until the proper bolt torque is achieved based on the value in the table above.



Evenly tightened bolts.



NOT evenly tightened bolts.

Step #6 Recheck the bottom two bolts after torquing to ensure that they are properly tightened.

PLP CAUTION:

Failure to properly tighten all three bolts could result in gap noise between the conductor and housing halves.



Completed application of the CUSHION-GRIP® Suspension. The work hole located on the bottom of the clamp has a maximum working load of 500 lbs.

CUSHION-GRIP® HOTSTICK INSTALL

Step #1 Before beginning clamp installation, loosen all bolts so that the top bolt is loose and the bottom bolts are just a few threads into their associated nuts. Ensure that the rubber grommet holding the top bolt in the CGS body is rolled back at least half of the bolt length. This will facilitate easy installation of the top bolt.



Step #2 Using pigtail or similar grabbing tools, lift the CGS upside down over the conductor using the working hole on the bottom of the body, or one of the suspension mounting holes. Carefully position the housing so the cushions are flush with the conductor and the bolts are parallel with the ground. Ensure that the CGS is located in its final suspension position on the conductor, as lateral movement of the suspension after beginning to tighten the bolts is not possible.



Step #3 Begin to tighten the bolts on the body starting with the single bottom bolt, and then moving on to the 2 top bolts. The bolts should only be tightened a few turns, allowing the clamp to freely rotate around the conductor and into its final location. Pulling down on the Cushion Grip Suspension body while the bolts are being tightened will help keep the body in line and minimize shaking, easing installation.



Step #4 Rotate the CGS around the conductor 180 degrees to its normal orientation, keeping the bolts parallel with the ground.



Step #5 Begin tightening the bolts to their final specified torque values, keeping the housing halves parallel by tightening the bolts in a circular pattern. This pattern should be repeated several times until the proper bolt torque is achieved. Please reference the hand installation application procedure for the specified torque values for the product being installed. After reaching the specified torque on each bolt, ensure that the housing halves are parallel. If the clamp halves are not parallel, make corrections as necessary.



Step #6 Install the clevis pin into the suspension ears, along with the appropriate hardware needed to connect to the insulator. Use the cotter key installation tool to install the cotter key. Installation of a bolt, nut, and cotter key is similar, with the exception that the nut must be tightened before the cotter key is installed.



SAFETY CONSIDERATIONS

This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. **FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN PERSONAL INJURY OR DEATH.**

Do not modify this product under any circumstances.

This product is intended for use by trained technicians only. **This product should not be used by anyone who is not familiar with, and not trained to use it.**

When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

For proper performance and personal safety, be sure to select the proper size PREFORMED™ product before application.

PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



PREFORMED LINE PRODUCTS

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