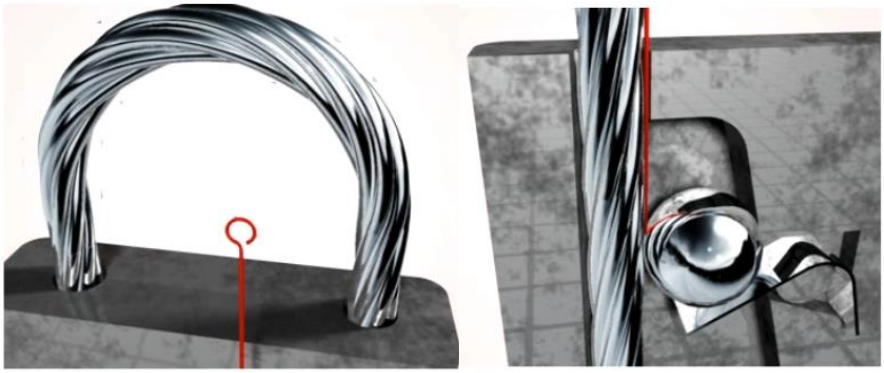
Cargo Container Seal Tampering

Background:

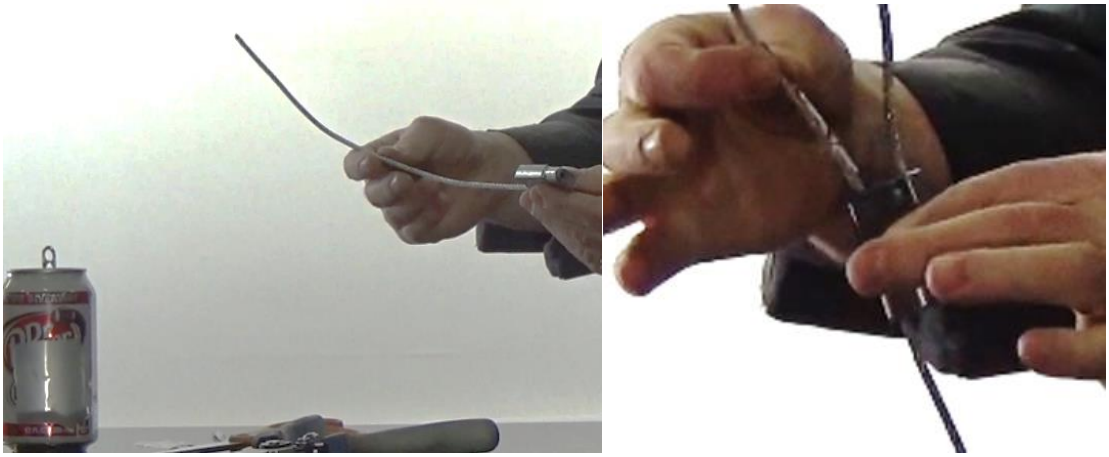
There are multiple ways to defeat each of the most typical seal types including ratcheting, picking, sleeving, freezing, cable changing, and tool manipulation.

Ratcheting: Typical cable seals can be defeated with a twist-out (ratcheting) method. The cable is twisted with a pair of pliers in a back and forth motion, and pulling out at the same time. On many cable seals, particularly those with a ball-lock mechanism, this method leaves no visible evidence of tampering. Once removed, cable can be reinserted at the remover's convenience.

Picking: Most cable type seals have a small gap between the cable and seal body at the opening where the cable is inserted. This gap is there to account for variations in cable size, but generally allows for a small piece of wire or metal to be inserted to defeat the locking mechanism. This method is most effective on seals that use a single ball or disc type locking mechanism.



Sleeving: This method uses a thin piece of metal wrapped around the cable and slid through the gap between the seal body and cable. It is effective on some cable seals where the gap is too small to get a pick into position, and is effective on seals with multi-ball or multi-disc mechanisms. The sleeve prevents the locking mechanism from interacting with the cable, allowing the cable to be slid out of the seal with no evidence of tampering.



Freezing: This method inserts water into the locking mechanism of the seal, preventing it from moving with the cable. The bottom of the seal is plugged with gum or similar adhesive to make the water pool inside the seal body. A CO_2 fire extinguisher is used to reduce the temperature of the seal body very quickly to well below freezing. Once removed and warmed, the seal can then be reused with no evidence of tampering.

Cable Changing: The bodies of most cable seals are made from soft metal that can be manipulated with heat and/or pressure. The secure end of the cable is generally held in place with a crimp. In this method, the cable is heated and/or pulled (very hard) from the crimp without damaging the body of the seal. Once out, the cable can be reinserted. Once reinserted, the seal body is struck with a rubber/plastic hammer, reseating the cable.

Tool Manipulation: Tool manipulation most commonly refers to bolt type seals. Bolt seals come in many sizes and shapes, with limited details on the bill of lading regarding the seal. Bolts are often interchangeable with several different types of lock lugs, making mismatched pairs possible. Some bolts do not have a seal number that matches the lug number, making it easy to cut the old bolt and replace it with an unnumbered piece. This method is a bit more time consuming, as the cut bolt must be drilled out or removed somehow. By replacing the bolt, most if not all signs of tampering are removed.

In addition to cutting and/or replacing the bolt, the locking lug can be quickly removed using a battery powered drill and large-bore locking chuck available at any hardware store. Once the chuck is tightened around the lug, the bolt is held still with pliers. While the drill is spinning, the lug is pulled firmly with the drill, which overcomes the spring tension of the locking mechanism with no visible evidence of tampering. The bolt can then be reinstalled exactly as it was originally. This is a particularly troubling method, as it is quite fast and requires very little skill or knowledge.

Conclusion:

For each of these tampering methods, there are seals on the market that address and/or show clear signs of tampering. CBP does not endorse or recommend specific brands of seal. Officers with nexus to cargo environments that used security seals are

encouraged to become familiar with and aware of seal appearance, inconsistencies of detail, and vulnerabilities of the different seal types.