Title LX Torquing Specification

Date 4th May 2016

Purpose This bulletin outlines the updated torquing procedure for LX modules

Scope This bulletin applies to all LX modules.

BACKGROUND

As part of the continuous improvement process, Ionpure® has reviewed the design of LX modules. This design review has allowed us to optimize seal compression while maximizing reliability. The optimized seal compression is achieved via the updated torquing procedure outlined in this bulletin.

Part of this design review has reinforced the importance of checking the torque and tightening as required in the following circumstances:

1. After transport
    a. When module(s) received from Evoqua/Ionpure
    b. After system is constructed and shipped to installation site
    c. Before deployment for mobile applications
2. Before startup (before introducing pressurized feed water)

Historically, Ionpure LX-HI modules have not required frequent retorquing as a result of hot-water sanitizations. However, it is good practice to periodically check the torque on HWS modules.

TORQUING PROCEDURE

If the nuts on the threaded tie bars have loosened during shipment, the pressure from the incoming water can cause permanent damage. In addition, inadequate torquing can contribute to lower salt removal and performance. Therefore the bolt torque must be checked and the module tightened as required before flowing water into the module. (Refer to Figure 1) Re-torque as required. Not all modules will need re-torquing.

Always drain water from the LX module before tightening the endplate tie bar nuts. This relieves pressure in the module. Failure to do so can result in irreversible damage.

Do not open the LX Module. Opening the module will void the warranty and do irreversible damage.

Tightening End Plate Tie-bar Nuts

Sequence: Figure 1 shows the sequence in which to re-torque the tie bars. Start the torquing process with # 1, and finish with # 14.

Torque Specification: The finished torque specification for each tie-bar is **25 ft-lbs (34 N-m).**

Tighten the end plate tie-bar nuts on the LX Module following these steps:

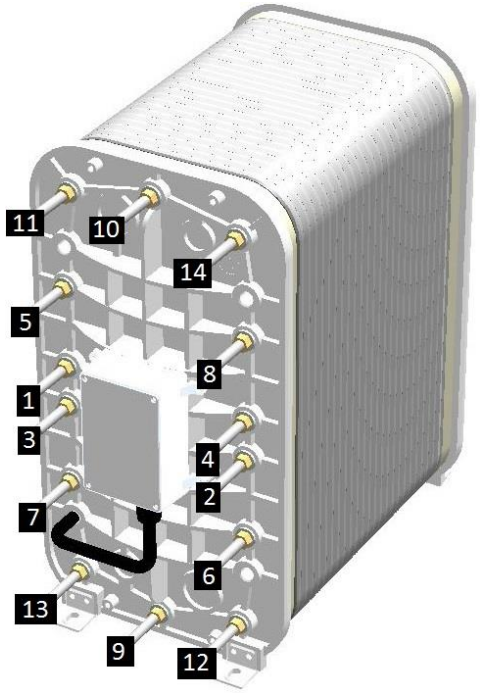

Figure 1: LX Module Tightening Sequence

1. Using a 19 mm open ended wrench, hold the acorn nuts on the plumbing (cathode) end of the module.

2. Set the torque wrench to **15 ft-lbs (20 N-m)**. Using the 19 mm extra deep socket (IONPURE part number W2T210908) mounted on the torque wrench, turn all 14 tie-bar hex nuts (anode end) to 15 ft-lbs (20 N-m) following the sequence in Figure 1.

3. Re-set the torque wrench to **25 ft-lbs (34 N-m)** and tighten all 14 tie-bar hex nuts (anode end) to 25 ft-lbs (34 N-m) following the sequence in Figure 1.

4. Use caution to avoid over tightening. Do not exceed 25 ft-lbs (34 N-m) of torque.

RECOMMENDATIONS

If you are not at the torque specification outlined in this bulletin, you must retorque the modules(s) using the above procedure.