CerAnode™ Technologies International

Division of APS-Materials, Inc. ----------

2022

Instruction Sheet

FOR

CerAnode Life Saver Anodes (LSA Disk Anode)

Lead Cable Version

(READ COMPLETELY BEFORE INSTALLATION)

Life Saver Anode (LSA) Installation Instructions

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SECTION 1 – UNPACKING –

1.1 Life Saver Anode - Remove all of the parts from the box and unwrap the anode's packing material.

1.2 Packing List - Each Life Saver Anode (LSA) Assembly includes:

1 pc - 1" FRP Hex Nut
1 pc - Flat FRP Washer
1 pc – ¾" Aluminum or 1" PVC LB Junction box assembly w/compression fitting

1.3 Hot Line - If there are any questions call the CerAnode Division of APS-Materials, Inc., at 937-278-6547 and ask for Greg Smith or
Email: ceranode@apsmaterials.com.

SECTION 2 - INSTALLATION SUPPLIES

2.1 Materials - The only additional material needed is 100% Silicone Construction Sealant. (Approximately 36" of a 1/8" bead per anode)

2.2 Tools - A 1 ½" crowfoot socket equipped with a torque wrench handle capable of indicating up to 50 ft-lb to tighten the 1" FRP nut when installing the anode Life Saver onto the structure.

2.3 Two People - A person is needed inside and outside the structure for efficient installation.

SECTION 3 - INSTALLATION PROCEDURE - Two people required

Note: Because the assembly involves the application of silicone sealant, the assembly steps must be performed within a 15-20 minute time period, quicker if possible, to prevent premature setting of the sealant.

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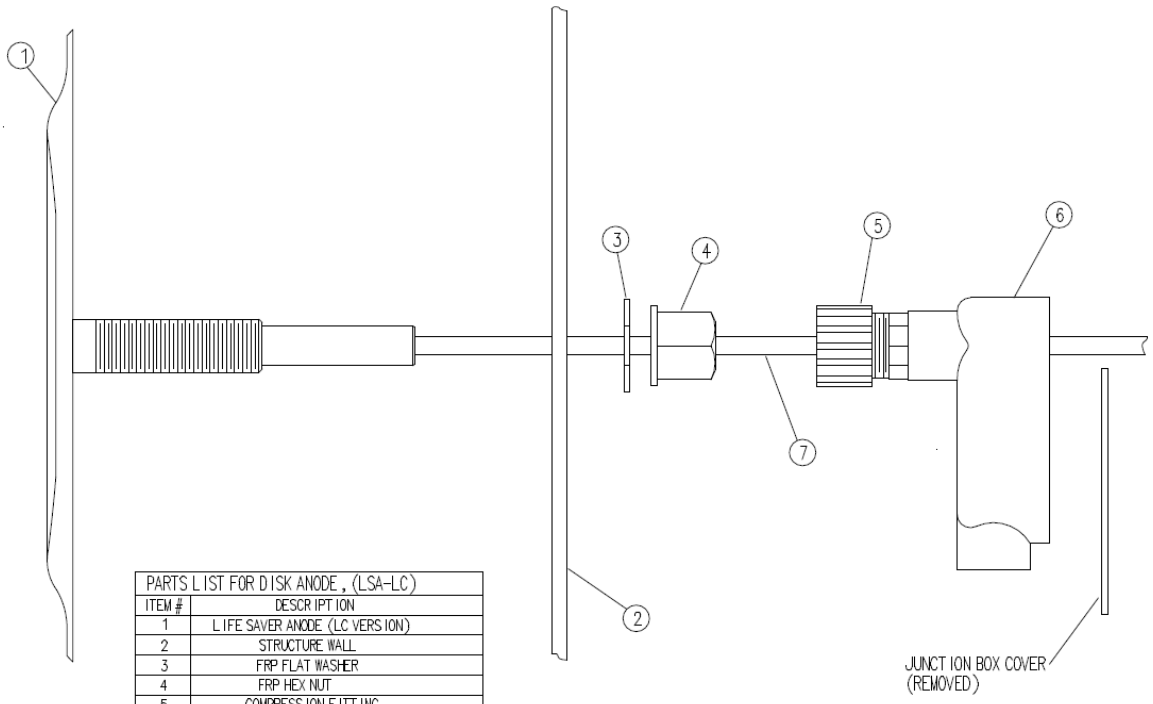
Installation Drawing



PARTS LIST FOR DISK ANODE, (LSA-LC)	
ITEM #	DESCRIPTION
1	LIFE SAVER ANODE (LC VERSION)
2	STRUCTURE WALL
3	FRP FLAT WASHER
4	FRP HEX NUT
5	COMPRESSION FITTING
6	LB JUNCTION BOX
7	LEAD CABLE

3.0 The Life Saver Anode (LSA) looks like a bolt with a very large diameter head. The back of the LSA is slightly concave. This serves two purposes. One, if the anode is mounted to a curved surface as is the case with some lock and dam gates, the anode will automatically conform. Two, the concave surface enhances the anode to structure seal as it is pulled against the surface of the gate by the anode mounting stud.

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3.1 The hole in the structure for mounting the LSA should be 1” Dia. +1/8” / -0”. The structure surface where the anode will seat should be clean of any loose material and corrosion products.

3.2 “Unroll” the cable starting near the anode, proceed toward the beginning of the cable. Pulling the loops off like a spring will introduce one full twist of the cable per loop and cause twisting and binding which will interfere with the next steps.

3.3 Insert the cable through the hole in the direction the anode is to be mounted. Keep the cable organized on the back side and free of twists and binding.

3.4 At the end of the cable slide the following parts in this order: (See drawing above)

3.4.1 Fiberglass (FRP) flat washer
3.4.2 FRP Nut
3.4.3 LB Junction Box (Remove cover for easier installation)

3.5 Clean the structure surface where the anode will seat of any dirt or foreign material transferred during the cable installation.

3.6 Apply a continuous 1/8" bead of silicone sealant (See 2.1) to the backside of the anode about 1" from the perimeter. Another continuous 1/8” bead should be applied 1/4" from the base of the mounting stud. Only if the structure surface is pitted and irregular should more sealant be used than a 1/8" bead. If excessive sealant is used, it may be difficult to remove the anode if replacement is ever necessary. The sealant provides a positive seal to prevent leakage of water.

3.7 Once the sealant is applied, carefully insert the anode mounting stud into the 1" hole on the structure making sure the anode seats properly against the structure surface.

3.8 On the backside of the structure where the stud protrudes, apply another small bead of silicone sealant around the base of the mounting stud. Apply another bead of silicone on the stud threads 3/4" back from the structure surface (around stud).

3.9 Install the FRP washer and nut onto the mounting stud. The nut should be tightened to about 30-35 foot-pounds. Over tightening may damage the FRP construction. A popping sound may be heard during tightening as the concave anode disk seats against the structure.

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3.10 After the anode is tightened down to the structure completely, wipe off the excess sealant that has squeezed out from under the shield and the nut.

SECTION 4 – INSTALLATION OF JUNCTION BOX ASSEMBLY

4.1 Loosen the Compression Cap on the compression fitting on the junction box. Slide the junction box assembly down onto the mounting stud. If there is resistance and the box will not slide down, DO NOT force it. Remove the box, slide your finger into the compression fitting and pull the rubber insert toward you to release it from the internal tapper. Re-install the junction box onto the mounting stud until it contacts the threads. Once seated and oriented where needed, lightly hand tighten the compression fitting. (Do not over tighten, it will cause warpage)

4.2 Connect the conduit to the Junction Box then start feeding cable through the conduit. Use adequate lubrication when pulling the cable. Re-install the Junction Box cover.

SECTION 5 - ISOLATION TESTING SUPPLIES (one of the following items)

5.1 DVM (Digital Voltmeter) - A meter with a resistance scale of at least 10 Mohm and a display of 3 1/2 digits is necessary.

5.2 Megger - A megger with an output of at least 1Kv is necessary.

SECTION 6 - ISOLATION TESTING

6.1 The isolation resistance can be measured between the anode face and the structure. This resistance can be measured with a DVM (digital voltmeter) or a “Megger”.

6.2 DVM Testing – Using a DVM, the resistance measured on the 10 Mohm scale should read as an “open circuit” or at least 10 Mohm

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6.3 "Megger" Testing - Using a "Megger" meter, the resistance measured should be greater than 10 Mohm on the 1Kv output range.

SECTION 7 – CONTINUITY TESTING

7.1 The continuity resistance can be measured between the anode face and the end of the cable. This resistance can be measured with a DVM. (Digital Voltmeter)

7.2 DVM Testing – Using a DVM, the resistance measured on the 100 Ohm scale should be less than 5 Ohm.

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