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Document #:

NEON.DOC.003968

Revision:

A

RI

- Reference Information



- Work Content



- Check



- Verify

Assembly #:

CD12030000

Assembly Description:

Sensor, Wet Deposition Collector, TESTED

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of

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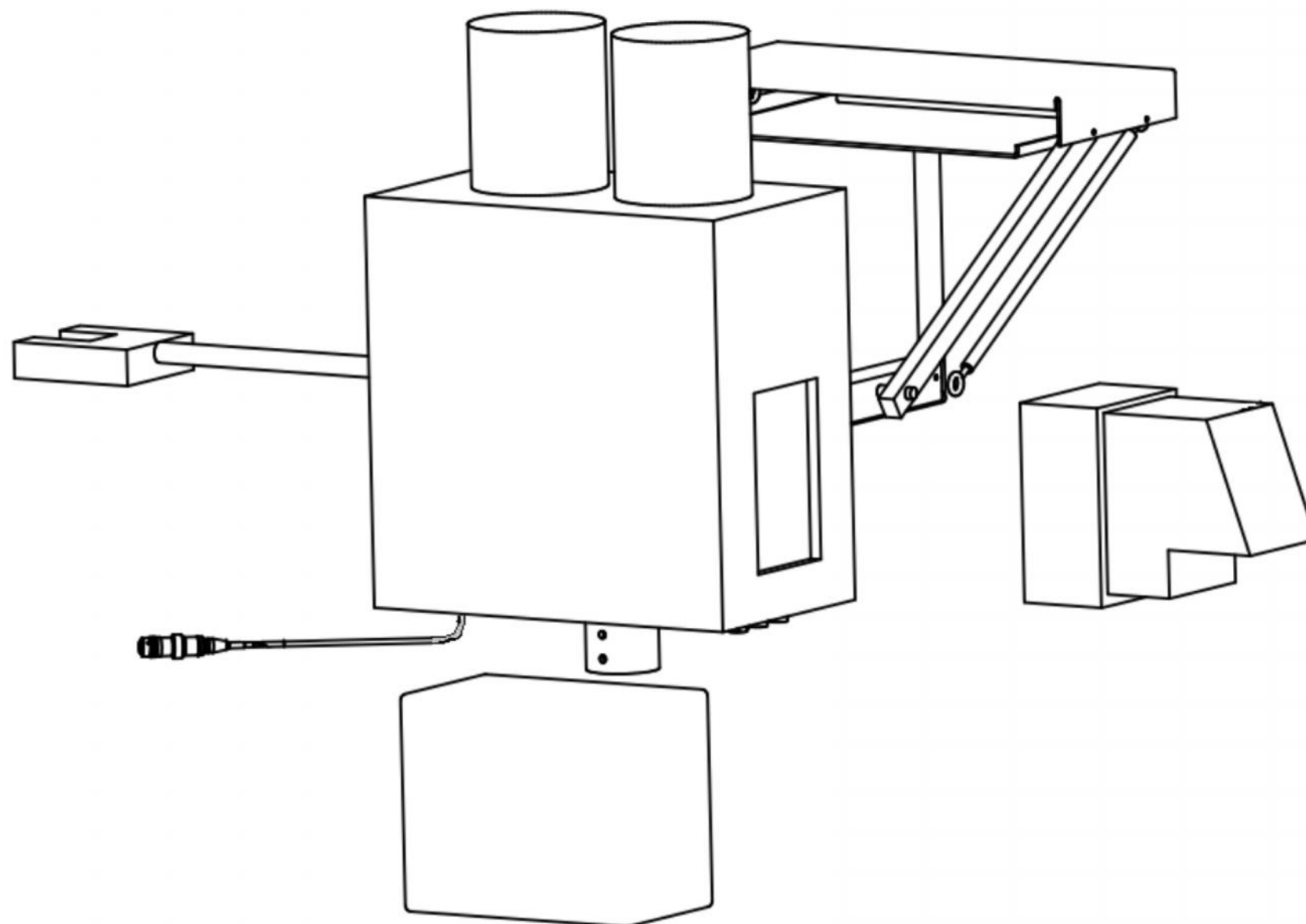
PREPARED BY:	ORGANIZATION:	DATE:
Ken Franzel	Production	11/15/2016

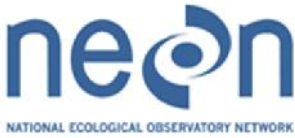
APPROVALS (Name):	ORGANIZATION:	APPROVAL DATE:
Laura Leyba-Newton	ENG	12/07/2016
Angelo Reyes	PROD	11/30/2016
Maurizio Miccolis	I&V	12/05/2016

RELEASED BY (Name):	ORGANIZATION:	RELEASE DATE:
Anne Balsley	CM	12/07/2016

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A	12/07/2016	Ken Franzel	ECO-04319	Initial Release

Assembly Isometric View





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Tools/Consumables/Documentation/Special REQs



- **Prior to assembly check the following:**
 - o Check that all tools (floor stock), consumables (floor stock/VMI) and documentation (procedure lookup tool/Agile *by request*) listed below are available and accounted for.
 - o Check that any special requirements are possible to accommodate. *See the author of this document (subject matter expert) for further explanation of Special REQ's if need be.*
 - o Check that all required quantities are correct via provided DBA work order.

REQUIRED / SUGGESTED TOOLS:

- 3/8" Nutdriver
- 1/8" flat blade screwdriver

REQUIRED CONSUMABLES:

- Mini-Black Cable Tie – 0310010000 (x1), *(floor stock, VMI)*
- 5/16" cable clamp – 0309080004 (1x), *(floor stock, VMI)*

REQUIRED DOCUMENTATION:

- NEON.DOC.000326 Sensor Test Procedure

SPECIAL REQUIREMENTS:

- None



STEP 1: Unpack Sampler & Install on Test Cart

- **0335070000 (x1), Sensor, Wet Deposition Sampler, NEON Custom.**
 - o Remove sampler from packaging. Mark the foam-in-place pads so sampler can be repacked.
 - o Place sampler on one of the mounting posts of the test cart. Make sure it slides down onto the pipe.
 - o Remove protective plastic shrink wrap.



STEP 2: Connect Motor

- o Connect the captive cable from the opener motor (back side) to the connector labeled 'MOTOR' under the left side of the sampler.





STEP 3: Install Rain Detector

- o Unpack rain detector (save packaging materials for repacking)
- o Remove wing nuts from mount location on left side of sampler.
- o Plug the sensor wiring into the mating plug on the sampler.
- o Tuck the wiring into the sampler and mount the detector.
- o Finger tighten the wingnuts.



1. Remove wingnuts



2. Plug in detector



3. Mount detector

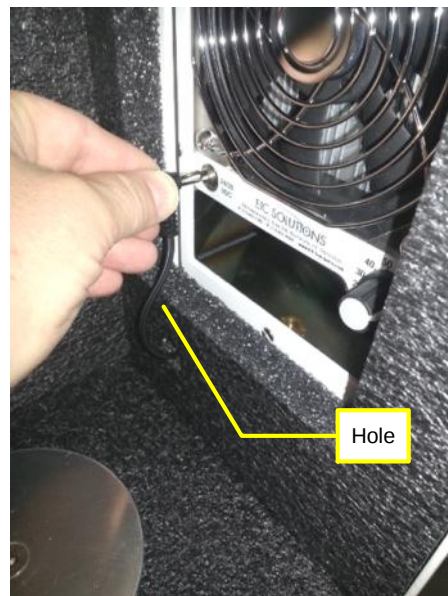


4. Mounted detector



STEP 4: Install Chiller

- **0345760001 (x1), Sensor Accessory, Thermoelectric Chiller.**
 - o Unpack the chiller assembly (save packaging materials for repacking).
 - o Remove mounting nuts from right side of sampler
 - o Carefully thread chiller power cord through hole in foam insulation.
 - o Mount chiller to right side of sampler. Finger tight on nuts is sufficient.
 - o Plug chiller power cord into jack (below fan).
 - o Set thermostat to approximately 77 degrees F.



1. cord through foam



2. mounted chiller



3. connect cord

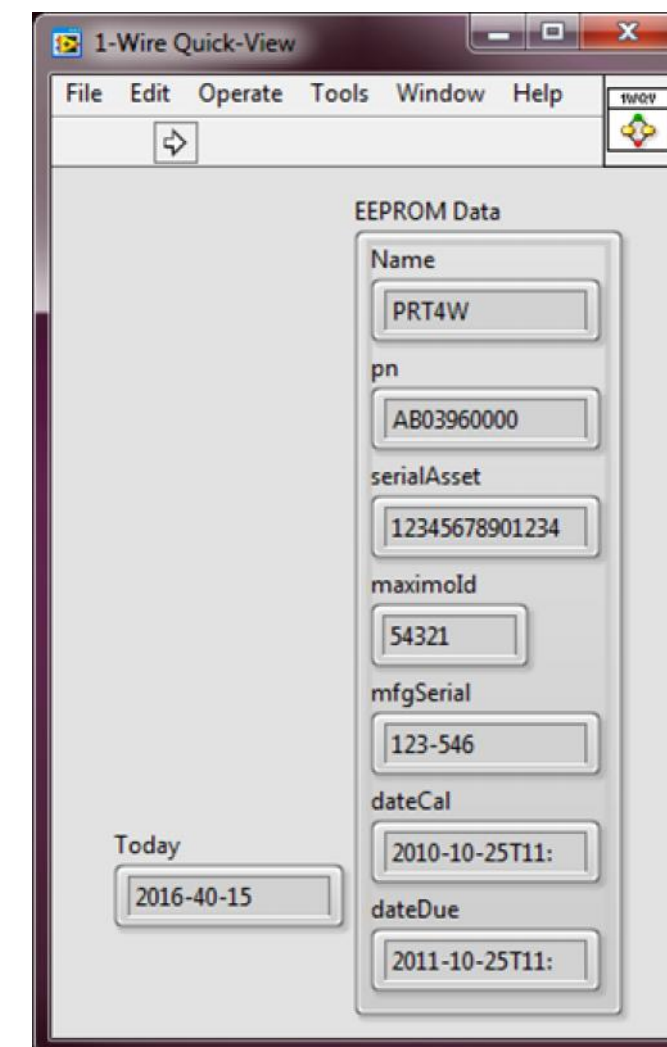


4. Set to 77 degrees.



STEP 5: Verify PRT

- **AB03960000 (x1), Assembly, Cable, PRT Submersible, 6 Feet, NADP.**
 - o Using the 1-Wire Quick-View application (at the sensor test fixture), verify that the PRT 1-wire data is programmed correctly. Part number must be AB03960000, and the asset, maximoID, and Serial number must match the unit. If not, reprogram at sensor test station per NEON.DOC.000326.
 - o Note: Asset tag number is on the metal barcode tag strapped to the cable. Maximo ID is a barcode label wrapped around the cable. Serial number is etched into the metal housing of the PRT.





STEP 6: Feed PRT through Cable Gland

- o Remove nut and plastic insert from cable gland.
- o Slide nut and plastic insert over the PRT and down onto the cable.
- o Thread the PRT up through the cable gland into the sampler cabinet.
- o Loosely attach the nut with plastic insert.



1. Remove nut & insert



2. Slide nut and insert over PRT



3. Slide PRT up into sampler cabinet



STEP 7: Mount PRT

- o Remove nut from left side of internal heater fan.
- o Slip plastic cable clamp over PRT cable. Attach to stud using nut removed previously. Snug, no torque.
- o Clamp should be placed where heat shrink has a step in it as it goes over the PRT body.
- o Attach a plastic cable tie just above the cable clamp to keep the PRT cable from slipping.
- o Pull PRT cable out the bottom cable gland until no excess is in cabinet.
- o Snug cable gland until cable does not slide.



1. Remove nut



2. Mount PRT



3. Closeup of clamp, tie



4. Snug cable gland



STEP 8: Set Heater Thermostat

- o Using small screwdriver, set thermostat to approximately 37 degrees F.



Set to 37 degrees



STEP 9: Connect Power Cables

- o Connect chiller power supply (external gray box) to sampler and chiller AC Power connections as shown.
- o Connect 240VAC power to Line Power input on chiller power supply.
- o Turn on the sampler with the rocker switch inside the cabinet. Green light by the power switch should turn on.



Sampler Power



240VAC Power Input

Chiller Power



Power Switch

STEP 10: Check Functionality

- o With system powered up, wave hand or soft object through the opening in the precipitation detector (to simulate rain). Stop once actuator arms move.
- o Actuator arms should slowly move the lid off the sampler openings on top.
- o The cover should return to rest on the sampler openings. If the cover isn't sitting flat on both openings, contact an engineer or technician for adjustment of arms.
- o Remove 240VAC power and disconnect AC power cables from sampler and chiller.



1. Simulate rain



2. Arms move cover off openings



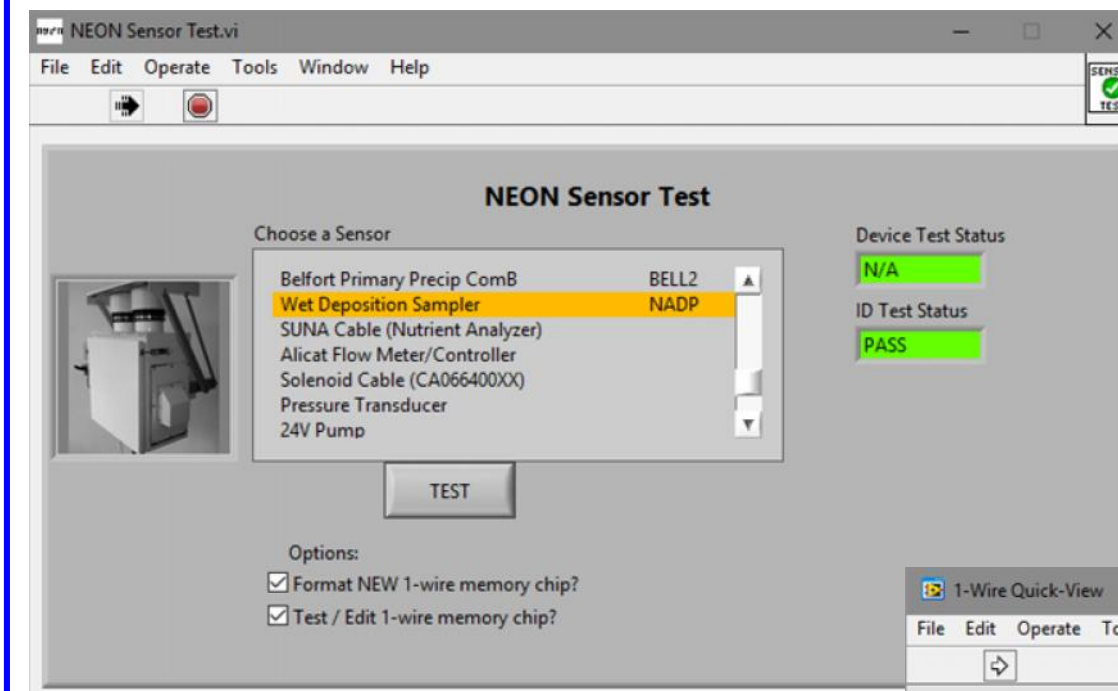
3. Cover returning to openings



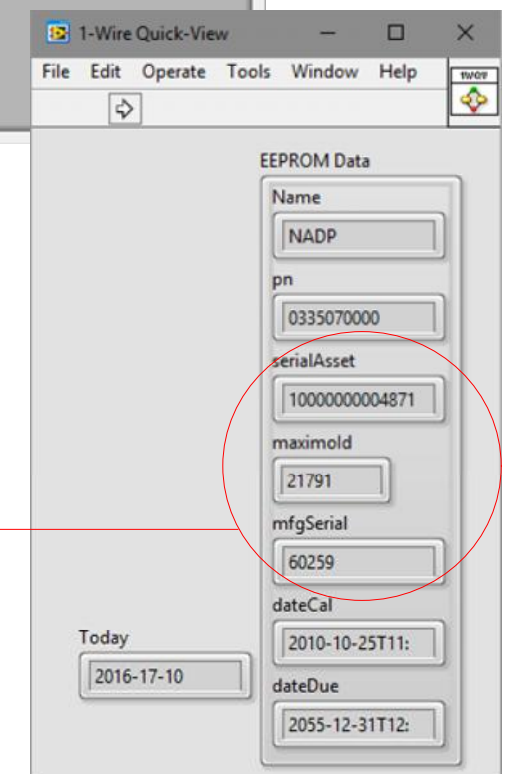
4. Cover seated properly on openings

STEP 11: Program 1-Wire Memory and Check

- o Use a 12-10 extension cable to connect the sampler (connector under left side) to the sensor test fixture.
 - o Program the 1-wire memory per NEON.DOC.00326 Sensor Test Procedure.
- ▲ Verify the programming using the 1-Wire Quick-View application.



1. Sensor Test



2. 1-Wire Quick-View



STEP 12: Verification

- o Verify both thermostats set properly.
- o Verify lid is resting flat on top of sampler intake openings.



STEP 13: Disassembly and Packaging

- o Remove power from the system.
- o Disconnect cables from chiller power supply, chiller, and sampler.
- o Remove chiller from sampler and repackage in original materials.
- o Remove precipitation detector from sampler and repackage in original materials.
- o Repackage sampler in original materials.
- o Label sampler box with assembly number, revision, and box 1/2.
- o Label chiller box with assembly number, revision, and box 2/2.



Set to 37 degrees



Set to 77 degrees.



Cover seated properly on openings

Assembly Final Product

