Battery Replacement

Battery Set 350-17358

PT9 C-PROOF
UNDERWATER LOCATING DEVICE

An inappropriate installation of the battery may lead to the destruction of the beacon´s electronic. Therefore the replacement must be carried out by a qualified technician only! Replace the Battery only with the Original Novega Battery 350-17350. Rev.1.4 of 12-November-2012

Shipment: 1x battery (350-17350), 1x pre-siliconed O-Ring (350-16227), 1x Label Battery Replacement (350-18580), 1x current calibration sticker

Warning: Fire, explosion and severe burn hazard. Do not recharge, disassemble, heat above 100°C, incinerate, or expose contents to water!

Advice: Battery should generally be stored in a cool, dry place! On no account try to recharge the battery. Use of an unauthorized battery will void the license and the warranty and may cause an inoperative or dangerous condition. Use of an unauthorized battery may cause a risk of fire or explosion. When the expiry date (vide the battery label) is reached, the battery should be disposed, and in accordance with all local, state and federal regulations. The battery replacement should be done in a maintenance room and under clean conditions, to avoid impurities around the O-Ring and in the interior of the ULD by dust, dirt or humidity. A replacement of the O-Ring is necessary at battery replacement, because there is the possibility of deposit accumulation through the course of time. A thin lubricant film can be applied on the battery cap threads before installation. The O-Ring is not to be treated with lubricant separately, because it is silicone-treated ex works already.

Battery Replacement:

- Secure the beacon with fixture 350-17359, as shown in figure 1.

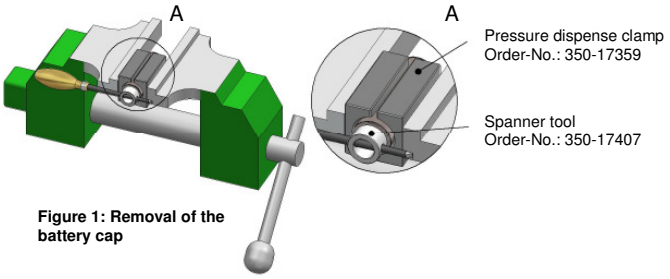

Figure 1: Removal of the battery cap

- Use the Spanner tool 350-17407 to remove the end cover, containing 3 wrench holes, by unscrewing anti- clockwise. The breakaway torque is usually high, so the spanner wrench should be held firmly in contact with the battery end cover, to avoid damages at the wrench holes.
- Remove the old O-Ring from the cover. Because of the danger of damage to the O-Ring groove, utilize neither a steel screwdriver nor sharp tools.
- Remove the old battery by tilting the beacon (vide figure 2).
- Clean the threads, the O-Ring groove and the thread on the cover by wiping them carefully with solvent.
- Carefully install a new O-Ring on the battery cap. Apply a thin lubricant film on the screw thread.

Figure 2: Removal of the battery

- Prior to the battery replacement, carry out a **RESET!** Use a wire jumper and connect the plus contact of the electronic unit for **10 SECONDS** with the golden housing contact pin. The battery must have already been removed! (vide figure 3)

Figure 3: Reset at least 10 sec.

- Install the new battery. The battery is provided with a polarity protection, so that the battery can only be installed into the beacon with the positive pole first.

Current consumption test on Sleep Mode: Connect the test prods, as shown in figure 4 and check for current leakage between the negative pole of the battery and the housing contact pin. The measured current must not exceed 15 µA. Underwater Locating devices exceeding a current consumption of more than 15 µA are to be replaced.

- Replace the cover and tighten it, until the cover flange covers the housing. The breakaway torque is 4Nm. Use hand force only on the spanner tool. Hold the beacon by means of a fixture, as shown in figure 1. Remove any excess lubricant from the exterior of the beacon.

Figure 4: Measurement of electrical consumption

Advice: The following function and battery test must be accomplished for correct functioning!

Function and Battery test:

Initially, ensure that both the water switch pins are clean and dry. Clean the parts with a mild detergent and a soft cloth. With the bridge circuit of the TAG 2550, the PT9 C-PROOF is activated for 60 seconds by connecting the positive and the negative poles for 3 seconds.

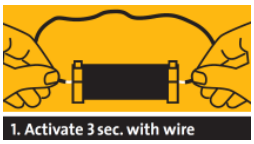

Figure 5: Starting the service operation mode

Figure 6: Check the ultrasonic signal with Tester TAG 2550

Focus the front side of the Tester TAG 2550 with a distance of approx. 10 cm on the PT9 C-PROOF and press the button in the middle of the TAG 2550. If the unit is ready-to-receive, the green LED „Ready“ will glow. The signals are optically displayed by the LED „Pulse“ and acoustically by an integrated loudspeaker.

For battery measurement, use a high impedance voltmeter (impedance 10MOhm). For voltage measurement, adjust the multimeter to a range of 20 V DC (direct current). During the 60 seconds, press both of the multimeter test prods on the beacon water switch pins left and right, and read off the battery voltage. The water switch pin at the battery cap is the negative pole. The minimum read-out voltage value must not fall below 2,5 V! When closing the battery, insertion date is to be noted on the PT9 C-PROOF.

Figure 7: Battery voltage measurement

Annotation of battery insertion date

Finally, the battery insertion date is to be recorded on the PT9 C-PROOF. For this purpose take the included label and stick it on the PT9 C-PROOF like shown on figure 8. From the manufacturing date of 10-2012 the insertion date of the battery is no longer necessary as the "Inspection Sticker Replacement" on the label is incorporated. Finally, take a calibration label and stick it onto the free space (“Inspection Sticker Replacement”). The month of battery change is positioned upwards, so that the arrow points to it. Also pay attention to take the correct calibration label with the current year!

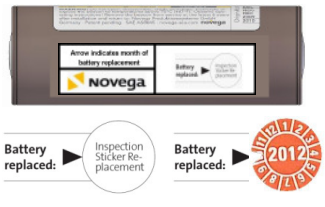

Figure 8: Date of battery replacement

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