

Battery Replacement



Battery Kit 20297

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Step 1: Control scope of delivery

1x battery (18725), 1x pre-siliconed O-Ring (16227), 1x calibration sticker

Step 2: Required appliance

Torque spanner (20613), Pressure dispense clamp (17359), TAG 2550 (17610), DC-Meter (20582), multimeter

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. The installation period of the battery is six years (vide individual installation period on the battery label). Once this installation period has expired, the battery should be disposed 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.

Battery Replacement:

Step 3: Clean the PT9

Clean the PT9 with a mild detergent and soft cloth.

Step 4: Open the PT9

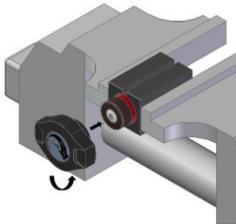


Figure 1: Open the PT9

Secure the beacon with fixture 17359, as shown in Figure 1. Use the torque spanner 20613 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.

Step 5: Remove the battery



Figure 2: Remove the battery

Remove the old battery by tilting the beacon (vide Figure 2).

Advice: When the expiry date is reached, the battery should be disposed, and in accordance with all local, state and federal regulations

Step 6: Measure the sleep mode current



Figure 3: Inserting of the DC-Meter in the PT9 Ninety

Insert the DC-Meter in the PT9 instead of the battery (vide Figure 3).



Figure 4: Measure the sleep mode voltage

Connect the test prods of the multimeter with the piston (negative pole of the battery) and the hexagon socket screw (contact with electronics) as shown in figure 4 and check the through-current. The value measured may vary, therefore, please wait until the value has stabilized. The measured current must not exceed 8 microamperes, a PT9 with a current of more than 8 microamperes has to be replaced immediately.

Advice: The multimeter must be set at μA (Microampere). Make sure there is the correct pin assignment of the test pins on the multimeter.

Step 7: O-Ring

Remove the old O-Ring from the cover. 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.

Advice: Because of the danger of damage to the O-Ring groove, utilize neither a steel screwdriver nor sharp tools.

Step 8: Install the new battery

Install the new battery.

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

Step 9: Close the PT9

Tighten the battery end cover by hand and make usage of the Torque 3.0 20613 only for the final turns. Remove any excess lubricant from the exterior of the beacon.

Advice: The correct tightening torque of 3.0 Nm has been reached when the torque wrench clicks.

Step 10: Function and Battery test

Initially, ensure that both 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 is activated for 60 seconds by connecting the positive and the negative poles for 3 seconds.

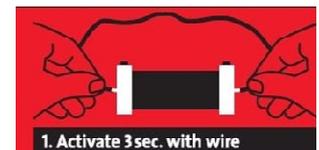


Figure 5: Starting the service operation mode

Focus the front side of the Tester TAG 2550 with a distance of approx. 10 cm on the PT9 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 10M Ω). 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



Figure 6: Battery voltage measurement

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 3.2V! When closing the battery, insertion date is to be noted on the PT9.

Advice: For PT9 beacons bearing serial numbers in the range of 30001 to 30335, the minimum voltage must not fall below 2.5V.

Step 11: Annotation of battery insertion date

Finally, the battery insertion date is to be recorded on the PT9. Take a calibration label and stick it onto the free space „Inspection Sticker Replacement“ (vide Figure 7). The month of battery change is positioned, so that the arrow points to it.

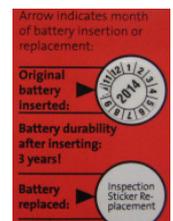


Figure 7: Inspection Sticker Replacement

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