

OBJECT:
NEMO SPORT BATTERY REPLACEMENT MANUAL

ITM18

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EVERY USE NOT AUTHORIZED WILL BE PURSUED TO NORM OF LAW

SPARE PARTS FOR NEMO SPORT

MARES CODE	DESCRIPTION
44200608	STRAP KIT NEMO SPORT
44200609	BATTERY COVER SCREWS KIT NEMO SPORT (4 PZ)
44200610	BATTERY NEMO SPORT (2032 - 3V) + GASKET
44200611	STRAP EXTENSION

1. SCOPE

THIS IS THE REFERENCE MANUAL FOR REPLACING THE BATTERY OF THE NEMO SPORT DIVE COMPUTER, AND IT MAY BE REFERRED FOR MAKING PRODUCT MANUALS.

BE SURE TO READ THIS MANUAL CAREFULLY BEFORE REPLACING THE DIVE COMPUTER'S BATTERIES.

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2. SETUP AND ENVIRONMENTAL FACTORS

2-1. JIGS AND TOOLS REQUIRING FOR SETUP

- A. CROSS-TIP SCREWDRIVER (I.E: TYPE USAG 342 - PH0)
- B. TWEEZERS
- C. TESTER (VOLTAGE)
- D. SILICON OIL (500,000 CS).

- E. CHAMOIS CLOTH
- F. NYLON CLOTH
- G. BRUSH (TOOTHBRUSH)
- I. PRESSURE CHAMBER TEST (A KIND OF PRESSURE TANK, MUST WITHSTAND 10 X ATMOSPHERIC PRESSURE) – (MARES PRODUCT CODE: 414991)
- J. LAMP WITH 50W BULB OR OVEN (MUST HOLD THE TEMPERATURE ON 50°C)
- K. WORK GLOVES (RUBBER) OR FINGERSTALLS
- L. FITTING AND REMOVING TOOL FOR SPRING BARS (I.E: BERGEON N° 6767-F) OR A FLAT-TIP SCREWDRIVER (1,4 MM CUT PROFILE, I.E: USAG 342 - 140)

2-2. ENVIRONMENTAL FACTORS

REPLACE BATTERIES IN AN ENVIRONMENT THAT HAS SUITABLE TEMPERATURE AND HUMIDITY CONDITIONS AND IS RELATIVELY FREE OF DIRT AND DUST.

2-3. BATTERIES

USE CR2032 LITHIUM BATTERY (MARES SPARE PART CODE: 44200610)

3. DISASSEMBLY AND ASSEMBLY

3-1. DISASSEMBLY AND ASSEMBLY STEPS

- DISASSEMBLY STEPS: FROM 1 TO 6
- ASSEMBLY STEPS: FROM 7 TO 12

- 1 REMOVE STRAP AND SPRING BAR
- 2 LOOSEN CASE BACK FIXING SCREWS
- 3 REMOVE CASE BACK
- 4 REMOVE CASE BACK GASKET
- 5 UNHOOK BATTERY CLAMP
- 6 REMOVE BATTERY
- 7 INSERT NEW BATTERY
- 8 HOOK BATTERY CLAMP
- 9 INSERT CASE BACK GASKET
- 10 RE-ASSEMBLE CASE BACK
- 11 FASTEN CASE BACK FIXING SCREWS
- 12 SET STRAP AND SPRING BAR

4. CAUTION POINTS FOR DISASSEMBLY AND ASSEMBLY

- BEFORE LOOSENING THE CASE BACK FIXING SCREWS, USE A BRUSH (SUCH AS A SOFT TOOTHBRUSH) TO CLEAN ON AND AROUND THE CASE BACK SO THAT DUST AND/OR DIRT DOES NOT ENTER THE MODULE.
- PUT ON A PAIR OF WORK GLOVES OR FINGERSTALLS TO PREVENT CONTAMINATION OF THE CASE BACK OR MODULE (BY FINGERPRINTS, SKIN FRAGMENTS, DIRT, ETC.).

4-1. STRAP AND SPRING BAR

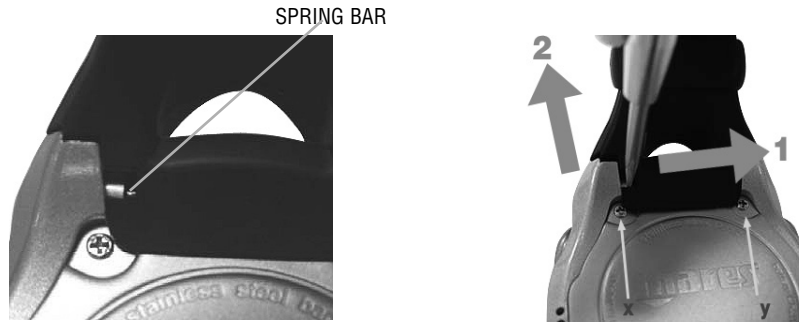
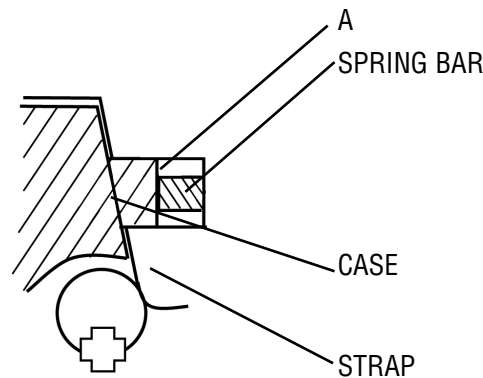


FIG.-1 REMOVE STRAP FROM CASE

- SELECT A STRAP WHICHEVER SIDE (WITH BUCKLE SIDE OR W/O BUCKLE SIDE) YOU FEEL EASIER. SELECTION OF THE ONE SIDE STRAP IS ENOUGH TO REMOVE THE CASE BACK.
- INSERT A FITTING AND REMOVING TOOL FOR SPRING BARS (I.E: BERGEON N° 6767-F) OR A THIN FLAT SCREWDRIVER(1,4MM CUT PROFILE, I.E: USAG 342 - 140) FOR SPRING BARS INTO GAP BETWEEN CASE AND STRAP, SHOWN BELOW DRAWING A.
- PUSH DOWN THE TOOL TO FIT BETWEEN CASE AND SPRING BAR GAP IN.



- FOR REMOVING SPRING-BAR, SLIDE PARALLEL DIRECTION OF THE SPRING BAR ACCORDING TO SHOWN ARROW 1 FIRSTLY THEN SLIDE OUT THE CORNER X (X: STRAP HAS NOTCH FOR SPRING BAR OPERATION) SECONDLY ACCORDING TO ARROW 2 WITH KEEPING THE WORK OF ARROW 1, SHOWN FIG.-1.
- NEED A CERTAIN FORCE TO THOSE WORKS
- FOR SET THE STRAP, REVERSE WORK OF THE REMOVING SPRING BAR PROCESS ARE REQUIRED.
- TO MAKE THE SET EASIER, FIRSTLY SET THE OPPOSITE CORNER OF THE STRAP Y (Y: STRAP HASN'T NOTCH) FIT TO THE CASE FIRMLY WITH SPRING BAR, THEN SET THE CORNER X (X: STRAP HAS NOTCH FOR SPRING BAR OPERATION) OF THE STRAP.
WHEN SET THE CORNER OF THE STRAP X, THE OPPOSITE CORNER OF THE STRAP Y SHOULD BE HELD TIGHTLY NOT TO COME OFF.



IN ORDER TO MAKE SURE THE SET, IT IS RECOMMENDED TO PUSH THE STRAP X AND Y CORNER INTO THE CASE. WHEN SET IS PROPERLY, A SNAP SOUND MAY HEAR. FOR A CONFIRMATION OF PROPER SET OF THE STRAP, PULL THE PAIR OF THE STRAP IF THEY COME THE CASE OFF..

4-2. CASE BACK FIXING SCREWS

- FOLLOW THE STEPS SHOWN FIG.-2 WHEN LOOSENING THE SCREWS 1 TO 4.

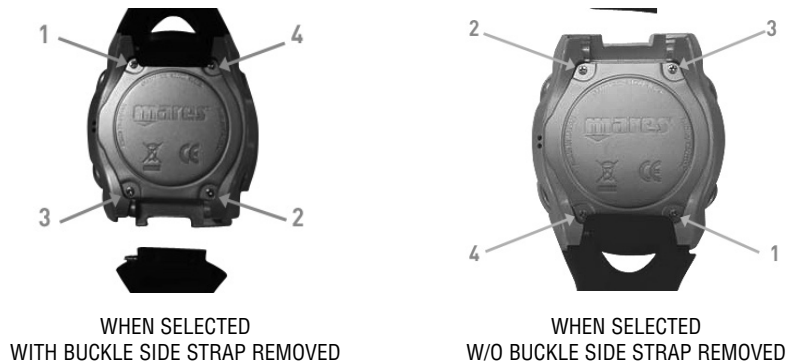


FIG.-2 LOOSEN AND FASTEN CASE BACK SCREW

- WHEN TIGHTENING THE SCREWS, TURN EACH SCREW ONCE IN THE ORDER 1 TO 4 SHOWN ABOVE, THEN TURN THEM AGAIN IN THE REVERSE ORDER 4 TO 1.
- BE SURE THE DIRECTION OF THE CASE BACK AND CASE BACK GASKET.
- FASTEN SCREWS WITH THE TORQUE VALUE AROUND 1 KG*CM.
- EXCESSIVE FASTENING TORQUE MAY DAMAGE THE SCREW HEAD, CASE AND/OR CAUSE THE SCREW HEAD TO DAMAGE THE CASE BACK.

4-3. CASE BACK

- AFTER REMOVING THE CASE BACK, USE A NYLON CLOTH TO REMOVE ANY DUST AND/OR DIRT FROM THE CASE BACK GASKET'S CONTACT AREA. DO NOT USE A FUZZY CLOTH THAT EASILY BECOMES DIRTY AND/OR FUZZY.
- AS THE ALARM FUNCTION A PIEZOCERAMIC ELEMENT IS USED. IT IS ATTACHED TO THE INSIDE OF THE CASE BACK. WHEN HANDLING THE DIVE COMPUTER, BE CAREFUL TO PROTECT THIS PIEZOCERAMIC ELEMENT DAMAGE OR DIRT (SUCH AS FINGERPRINTS).
- IF THE PIEZOCERAMIC ELEMENT GETS DIRTY, IT MAY CAUSE ALARM OPERATION FAULTS (THE ALARM BUZZER MAY NOT SOUND).

4-4. CASE BACK GASKET

- BE CAREFUL TO AVOID DAMAGING OR CHIPPING THE CASE BACK GASKET (HEAR AFTER GASKET). IF THE GASKET APPEARS WORN, INFLEXIBLE, OR OTHERWISE DAMAGED, REPLACE IT WITH A NEW ONE.
- WE RECOMMEND TO CHANGE A GASKET AT THIS TIME.



GASKET IS CUT



GASKET IS WORN

- APPLY A COAT OF SILICON OIL TO THE GASKET BEFORE INSERTING IT.
- BE CAREFUL NOT TO LET ANY DUST, DIRT OR OTHER CONTAMINANTS ADHERE TO THE SILICON OIL-DIPPED THE GASKET.

4-5. BATTERY CLAMP

- INSERT THE TWEEZERS INTO THE BATTERY CLAMP SHOWN FIG.-3, AND UNHOOK THE BATTERY CLAMP (THE DIRECTION OF THE ARROW).



WHEN UNHOOKING OR HOOKING THE BATTERY CLAMP, BE CAREFUL NOT TO TOUCH THE ELECTRONIC COMPONENTS. TOUCHING THESE COMPONENTS MAY AFFECT THE ACCURACY OF MEASUREMENT SUCH AS WATER DEPTH AND ALTITUDE, OTHERWISE IMPROPER OPERATION.



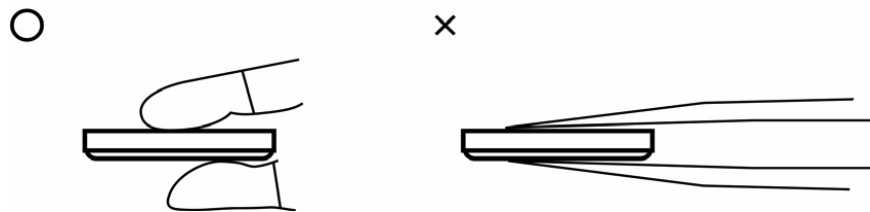
FIG.-3 UNHOOKING BATTERY CLAMP

4-6. BATTERY

- BE CAREFUL NOT TO CUT YOUR FINGERS ON THE BATTERY CLAMP PLATE.
- IMMEDIATELY AFTER REMOVING THE BATTERY, APPLY A PIECE OF TAPE TO IT OR MARK IT WITH A PERMANENT MARKER TO DISTINGUISH IT FROM NEW BATTERIES.
- BEFORE INSERTING A NEW BATTERY, USE A TESTER TO CONFIRM THE BATTERY'S VOLTAGE AS 3.0V OR MORE.

WEAR WORK GLOVES OR FINGERSTALLS WHEN HANDLING THE BATTERY, AS SHOWN BELOW. IF USING TWEEZERS, BE CAREFUL TO AVOID SHORT-CIRCUITING THE BATTERY. A SHORT-CIRCUITED BATTERY HAS A GREATLY REDUCED POWER CAPACITY.

HOW TO HANDLE THE BATTERY



- AFTER INSERTING THE NEW BATTERY, CONNECT AC TERMINAL SPOT ON THE CIRCUIT BOARD AND PLUS OF THE BATTERY (CIRCUIT CLAMP PLATE) BY TWEEZERS. OR SHORT THE TWO SPOTS AT THE CIRCUIT BOARD'S RESET TERMINAL SHOWN FIG.-4. THESE OF EACH RESET THE SYSTEM.

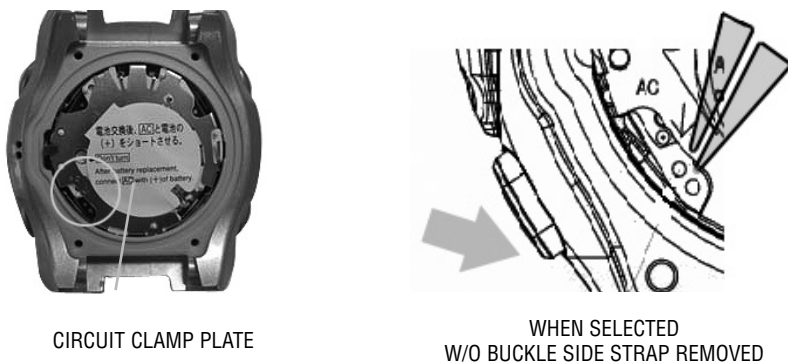


FIG.- 4 HOW TO RESET THE SYSTEM

- WHEN THE SYSTEM IS CORRECTLY RESET, THE DISPLAY GOES BLANK FOR A MOMENT THEN REAPPEARS AS SHOWN FIG.-5.

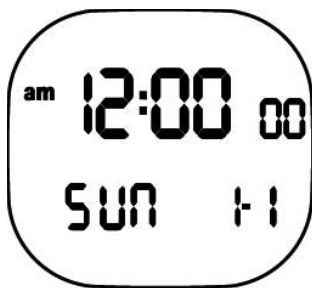


FIG.- 5 DISPLAY AFTER THE SYSTEM RESET

- IF THE SYSTEM HAS NOT BEEN RESET THE DIVE COMPUTER MAY NOT FUNCTION CORRECTLY, SO BE SURE TO RESET IT AND THEN CONFIRM CORRECT OPERATION OF FUNCTIONS.



AFTER THE UNIT HAS BEEN RESET CORRECTLY, MEASUREMENT SYSTEM ENTERED “M” (IT IS DEFAULT STATE). AT THE PLAN MODE, PUSH THE LOCK BUTTON FOR 15 SECONDS, SO THAT THE ALARM SOUNDS ONE TIME, AND THE MEASUREMENT SYSTEM CHANGES TO “FT”.

5. CHECKS TO BE PERFORMED AFTER REPLACING THE BATTERY

BE SURE TO PERFORM THE FOLLOWING CHECKS FOR AFTER THE REPAIR.

PRESSURE CHAMBER TEST



BEFORE PERFORMING THE OPERATIONS FOLLOWING DESCRIBED ATTENTIVELY READ THE MANUAL OF USE SUPPLIED WITH THE PRESSURE CHAMBER (COD. 414991)



MARES REALIZES THE TEST OF VERIFICATION OF INFILTRATION OF WATER WITH EQUIPMENTS DEVOTED AND EXTREMELY ADVANCES. IN SUCCESSION IT IS DESCRIBED A METHOD THAT GIVES ANALOGOUS RESULTS DESPITE THE USE OF DIFFERENT INSTRUMENTATION



FIG. 6A



FIG. 6B

5-1. CLOCK SETTING

USE THE LOCK, SELECT AND SET BUTTONS TO SET THE CORRECT TIME AND DATE.



THESE BUTTONS MAY NOT OPERATE CORRECTLY IF THE MODULE WAS NOT SECURELY SET BEFORE FASTENING THE CASE BACK.

5-2. CHECK WATERPROOFING (FIG. 6A - 6B)

- PLACE THE COMPLETE UNIT INTO THE PRESSURE CHAMBER TEST, THEN INCREASE THE PRESSURE TO 6 ATMOSPHERES (PER 60 METERS) AND LEAVE IT IN THE TESTER FOR 10 TO 20 MINUTES.
- REMOVE THE UNIT FROM THE TESTER AND WIPE THE UNIT, THEN PUT UNDER THE 50W LAMP AT 30CM AT 50° C ABOUT 30 MINUTES



IN ORDER TO CHECK THE TEMPERATURE, MARES RECOMMEND TO USE, CLOSE TO NEMO SPORT, A THERMOMETER OR A NEMO DIVE COMPUTER WITH THE DISPLAY SET WITH PERMANENT TEMPERATURE.

- TAKE OUT THE UNIT AND PLACE A DROP OF WATER (20 TO 25°C) ON THE GLASS OF THE UNIT.
- AFTER ABOUT 1 MINUTE, WIPE THE GLASS WITH A DRY CLOTH THEN CHECK FOR CONDENSATION ON THE GLASS'S INNER SURFACE. IF ANY CONDENSATION (CLOUDING, DROPLETS, ETC.) APPEARS, THERE IS A WATERPROOFING PROBLEM.