Ambient Pressure Diving Ltd
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Lithium Battery Pack Test Summary in accordance with Sub Section 38.3 of UN Manual of Tests and Criteria, Revision 8 – Revision 2, 4th August 2026	
BATTERY TRANSPORTATION INFORMATION	
Battery pack construction	Four Rechargeable Lithium-ion Polymer cells, ID E655165-002, supplied by IBT Solutions Ltd, manufactured by SHENZHEN SAI JIAO YANG ENERGY TECHNOLOGY CO., LTD, matched and assembled into two 7.4v batteries, with an AP battery PCB featuring two shut off reed switches, operated externally by a twin magnet clip, to switch off the battery outlets for shipping purposes and featuring an M8 inlet for charging purposes, using the bespoke AP charger RB06.01.70 and the mains charging adaptor RB06.01.80 and 12v charging adaptor, RB06.01.90, the cells and PCB are inserted into a Polypropylene housing and then soft gelled. The soft gel allows for expansion of the cells during charging
Battery Pack:	contains two separate batteries. Each battery consists of two cells assembled in series.
Specification per cell:	3.7 volts, 2400 mAh, 8.8 Wh, 44 g net weight.
Specification per battery:	7.4 volts, 2400 mAh, 17.76 Wh, 88 g net weight.
Specification per battery pack:	7.4 volts, 4800 mAh, 35.52 Wh. Net weight of cells 176 g; gross weight of the complete battery pack 272 g, including the polypropylene housing, the potting gel, the PCB and the charging port.
Battery pack conformity testing:	UN Manual of Test and Criteria revison 8, section 38.3
Test House Cells:	Guangzhou MCM Certification & Testing Co Ltd 1F No.13, Zhong San Section, ShiGuang Road, Panyu District, Guangzhou City, Guangdong Provence, China. Tel: 0086 20 347 77 662 / 0086 20 347 77 663 Email: mark.miao@mcmtek.com Web: http://www.mcmtek.com Test report No. SQY202110817U01
Test House Battery Pack: Tests T1, T2,T5 and T7 (T6 and T8 not applicable)	Ambient Pressure Diving Ltd (AP Diving) Water ma Trout Industrial Estate, Helston, Cornwall, TR13 0LW , United Kingdom. Tel: 0044 1326 561 040 Email: martinparker@apdiving.com

	Web: https://www.apdiving.com and https://www.apdiving.eu , Test report No. RB06_01_60 UN38.3 Test_01 Test dates: August 2nd 2023 to March 6th 2024
Test House Battery Pack: Tests T3 and T4	Axis Test Laboratories, 11A Oakway Court, Meadowfield Industrial Estate, Durham, DH7 8XD. United Kingdom. Tel: +44 (0)191 378 4653 Email: Ian.Howson@axislaboratories.co.uk Web: https://www.axistestlaboratories.co.uk/ Test report No. 23038.01 Test dates: 5th to the 17th January 2024

Lithium Cell Tests Performed by Guangzhou MCM Certification & Testing Co Ltd :

PERFORMED TESTS			RESULT
38.3.4.1	T1	Altitude Test	Pass
38.3.4.2	T2	Thermal Test	Pass
38.3.4.3	T3	Vibration	Pass
38.3.4.4	T4	Shock	Pass
38.3.4.5	T5	External Short Circuit	Pass
38.3.4.6	T6	Impact/Crush	Pass
38.3.4.7	T7	Overcharge	Not applicable
38.3.4.8	T8	Forced Discharge	Pass

Battery Pack Tests Performed

The RB06/01/60 Battery Packs is classed as a Small Battery Pack within the UN Manual of Tests and Criteria Rev.8, 38.3.

PERFORMED TESTS			Test House	RESULT
38.3.4.1	T1	Altitude Test	AP Diving	Pass
38.3.4.2	T2	Thermal Test	AP Diving	Pass
38.3.4.3	T3	Vibration	Axis Test Laboratories	Pass
38.3.4.4	T4	Shock	Axis Test Laboratories	Pass
38.3.4.5	T5	External Short Circuit	AP Diving	Pass
38.3.4.6	T6	Impact/Crush	Not applicable	Not applicable
38.3.4.7	T7	Overcharge	AP Diving	Pass
38.3.4.8	T8	Forced Discharge	Not applicable	Not applicable

T6 and T8 are not applicable according to Table 38.3.3 – Small batteries

Conclusion:

The Battery pack, RB06/01/60 manufactured by AP Diving, for use in it's rebreather products, passes the UN Manual of Tests and Criteria, revision 8, 38.3 and is deemed safe for air transportation.

Transport of the RB06/01/60 battery pack – position as at 1st January 2026

The IATA Dangerous Goods Regulations, 67th Edition, effective 1st January 2026, extended the mandatory state of charge (SoC) limitation for lithium ion cells and batteries transported by air. The position for the RB06/01/60 pack is as follows.

1. Battery pack shipped separately from the rebreather (UN3480, Packing Instruction 965)
The pack must be offered at a state of charge of not more than 30% of its rated capacity. Section II of PI965 was withdrawn from the 63rd Edition of the IATA DGR on 1st January 2022, so the consignment must be shipped as fully regulated Class 9 dangerous goods under Section IA or Section IB, with a Shipper's Declaration for Dangerous Goods, the Class 9 lithium battery hazard label and the lithium battery mark as applicable.

2. Battery pack shipped packed with, but not installed in, the rebreather (UN3481, Packing Instruction 966)
From 1st January 2026 the 30% state of charge limitation also applies to PI966 for cells and batteries with a Watt-hour rating exceeding 2.7 Wh. Each battery within the RB06/01/60 pack is rated at 17.76 Wh, so the pack must be offered at a state of charge of not more than 30% of its rated capacity. Section II of PI966 may be used provided the package contains not more than 5 kg net of batteries and the quantity of batteries is the minimum required to power the equipment.

3. Battery pack contained in the rebreather (UN3481, Packing Instruction 967)
No mandatory state of charge limitation applies to batteries contained in equipment under PI967. The RB06/01/60 pack may therefore be shipped fully charged when it is installed in the rebreather. IATA nonetheless recommends, but does not require, a state of charge of not more than 30% of rated capacity, or a displayed battery level of not more than 25%, and AP Diving supports that recommendation where operationally practicable.
The pack is fitted with two shut-off reed switches operated externally by a twin magnet clip. The magnet clip must be fitted to isolate the battery outlets before shipment, whichever packing instruction is used.

4. Marking and documentation
As per the IATA Lithium Battery Guidance Document, FAQs section F – "a lithium battery mark is not required on the package" and section G – "the provision allows for packages containing no more than four cells or two batteries installed in equipment per package, to move without the lithium battery mark and therefore without the compliance statement on the airway bill." The RB06/01/60 pack contains two batteries, so a package containing a single pack installed in equipment falls within this provision.

5. Surface transport
For sea (IMDG Code) and road and rail (ADR/RID), UN3480 and UN3481 apply. Consignments meeting the conditions of Special Provision 188 – cells of not more than 20 Wh and batteries of not more than 100 Wh – may be transported as excepted lithium batteries. No state of charge limitation applies by surface modes.

The UN 38.3 test results recorded in this summary are unaffected by the 2026 amendment and remain valid. This revision updates the transport information only.

Revision history: Revision 1 issued 6th March 2024. Revision 2 issued 4th August 2026 – transport information updated for the IATA DGR 67th Edition (1st January 2026) state of charge requirements; gross pack weight added.

Signed:

M J Parker
Martin Parker,
Managing Director, AP Diving, Helston, UK
Date: 4th August 2026