

Quality Assurance

December 20, 2004

Our Ref.: C- 241210

Memo

To: Tadiran customers and distributors

From: M. Babai, Quality Manager

Subject: New Rules for the Transportation of Primary Lithium Cells and Batteries shipped *within, into* and *from* the United States of America

On December 15th, 2004, the US Department of Transportation's Research and Special Programs Administration (RSPA) issued new rules banning or restricting the bulk transport of all primary (non-rechargeable) lithium batteries and cells aboard **passenger** aircraft. These new rules become effective on **December 29th, 2004** and can be found in their entirety in the December 15 Federal Register, 49 CFR Parts 171, 172, 173 and 175 under the title "Hazardous Materials; Prohibition on the Transportation of Primary Lithium Batteries and Cells Aboard Passenger Aircraft; as an Interim Final Rule. A copy of the new rule is attached to this letter.

Tadiran Batteries Ltd. has summarized these new rules for the convenience of its customers and distributors. This summary applies to all non-rechargeable lithium batteries shipped **from, into** or **within** the United States.

The new rules are applicable mainly for batteries earlier considered "Non restricted" for transportation with lithium content up to 5 grams per cell (e.g., D size cell or smaller) and up to 25 grams per battery.

There are **No** changes for batteries Classified as Class 9 Hazardous material for packages greater than 5 kg. However, shipment of Class 9 packages with less than 5 kg weight must be shipped only in cargo aircraft and must have "CARGO-AIRCRAFT ONLY" label and documentation.

TRANSPORTATION OF PRIMARY LITHIUM BATTERIES:

1. The transport of any amount of primary lithium batteries is prohibited aboard passenger aircraft except for shipping with or in equipment or for personal use as noted below.
2. In addition, the outer shipping container of all packages containing primary lithium batteries, that are exempted from Class 9 according to CFR49 (all Tadiran cells up to the D cells), must be marked with the following statement :

"PRIMARY LITHIUM BATTERIES – FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT"

This statement must be on a background of contrasting color with size of letters:

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- At least 12 mm (0.5 inch) in height on packages having a gross mass of more than 30 kg (66 lbs); or
- At least 6 mm (0.25 inch) on packages having a gross mass of 30 kg (66 lbs) or less.

This marking is required for primary battery shipments for all modes of transportation, e.g., air and surface. Battery shipments may continue to be transported by all other mode of transportation including cargo aircraft provided they meet the other requirements of 49 CFR Parts 171, 172, 173 and 175.

3. Class 9 battery shipments, packaging, and labeling requirements are unchanged by this rule. However, under the new rule, shipments of Class 9 with less than 5 kg, are also banned from passenger aircraft, and must have CARGO-AIRCRAFT ONLY label and documentation.

EQUIPMENT SHIPPED WITH PRIMARY LITHIUM BATTERIES OR CELLS:

Equipment containing or packed with primary lithium battery or cell can be transported aboard **passenger** carrying aircraft under all the following conditions:

1. Cells are with lithium content up to 5 gram (D cells) and batteries are with lithium content of up to 25 grams.
2. The cells or the batteries must be packed in strong packaging (when packed with equipment).
3. Only as many lithium batteries or cells as are needed to power the device may be included.
4. The total allowable weight of the batteries depends on whether the batteries are shipped with the device or inside the device. For batteries packaged **inside** the device, the net weight of the batteries may not exceed 5 kg. For batteries packaged **with** the device, the gross weight of the entire package may not exceed 5 kg.

There are no new labeling requirements for devices shipped with lithium batteries that comply with the above restrictions.

EXEMPTIONS- BATTERIES AND CELLS CARRIED BY PASSENGERS

Airline passengers may continue to carry primary lithium batteries or cells for their equipment and a reasonable amount of spare primary lithium batteries in their carry-on and checked luggage, if the lithium content of the cells is up to 5 gram (D cells) and the lithium content of batteries is up to 25 grams.

ADDITIONAL INFORMATION:

1. These new rules become effective on **December 29th, 2004**.
2. There is a comment period for this new ruling. All comments have to be submitted to DOT by February 14, 2005. The comments should be identified by DOT DMS Docket Number: RSPA-04-19886 (HM-224E), at the web site: <http://dms.dot.gov>. Follow the instructions for submitting comments on the DOT electronic site.

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3. For further information from RSPA contact John A. Gale. Office of Hazardous Materials Standards, RSPA, Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590-0001, Telephone (202) 366-8553.

The above summary is Tadiran Batteries interpretation of the new rules and regulations. However the ultimate responsibility of adherence to the new rules and regulations lies with each individual shipper. If you have any questions concerning this please contact:

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Best Regards



Dr. M. Babai
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containers, Reporting and recordkeeping requirements.

49 CFR Part 173

Hazardous materials transportation, Packaging and containers, Radioactive materials, Reporting and recordkeeping requirements, Uranium.

49 CFR Part 175

Air carriers, Hazardous materials transportation, Radioactive materials, Reporting and recordkeeping requirements.

■ In consideration of the foregoing, 49 CFR Chapter I is amended as follows:

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

■ 1. The authority citation for part 171 continues to read as follows:

Authority: 49 U.S.C. 5101–5127, 44701; 49 1.45 and CFR 1.53; Pub L. 101–410 section 4 (28 U.S.C. 2461); Pub. L. 104–134, section 31001.

■ 2. In § 171.11, paragraph (d)(18) is added to read as follows:

§ 171.11 Use of ICAO Technical Instructions.

* * * * *

(d) * * *

(18) Primary lithium batteries and cells are forbidden for transportation aboard passenger-carrying aircraft. Equipment containing or packed with primary lithium batteries or cells are forbidden from transport aboard passenger-carrying aircraft except as provided in § 172.102, Special Provision A101 or A103, of this subchapter. Except for primary lithium batteries and cells that are contained in or packed with equipment, packagings containing primary lithium batteries and cells that meet the exceptions in § 173.185(b) and (c) of this subchapter must be marked “PRIMARY LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT” and may be transported aboard cargo-only aircraft.

■ 3. In § 171.12, paragraph (b)(22) is added to read as follows:

§ 171.12 Import and export shipment.

* * * * *

(b) * * *

(22) Except for primary lithium batteries and cells, packagings containing primary lithium batteries and cells that meet the exceptions in § 173.185(b) and (c) of this subchapter must be marked “PRIMARY LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT”.

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■ 4. In § 171.12a, paragraph (b)(12) is added to read as follows:

§ 171.12a Canadian shipments and packagings.

* * * * *

(b) * * *

(12) Except for primary lithium batteries and cells, packagings containing primary lithium batteries and cells that meet the exceptions in § 173.185(b) and (c) of this subchapter must be marked “PRIMARY LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT”.

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PART 172—HAZARDOUS MATERIALS TABLE, SPECIAL PROVISIONS, HAZARDOUS MATERIALS COMMUNICATIONS, EMERGENCY RESPONSE INFORMATION, AND TRAINING REQUIREMENTS

■ 5. The authority citation for part 172 is revised to read as follows:

Authority: 49 U.S.C. 5101–5127, 44701; 49 CFR 1.53.

§ 172.101 [Amended]

■ 6. In § 172.101, in the Hazardous Materials Table, the following changes are made:

a. For the entry “Lithium batteries, contained in equipment”, in Column (7), Special Provisions “A102, A104” are added and Column (9A) is revised to read “See A102, A104”.

b. For the entry “Lithium batteries packed with equipment”, in Column (7), Special Provisions “A101, A103” are added and Column (9A) is revised to read “See A101, A103”.

c. For the entry “Lithium battery”, in Column 7, Special Provision “A100” is added and Column (9A) is revised to read “See A100”.

■ 7. In § 172.102, in paragraph (c)(1), Special Provision 134 and 157 are revised and in paragraph (c)(2) Special Provisions A100, A101, A102, A103, and A104 are added to read as follows:

§ 172.102 Special provisions.

* * * * *

(c) * * *

(1) * * *

Code/Special Provisions

* * * * *

134 This entry only applies to vehicles, machinery and equipment powered by wet batteries, sodium batteries, or lithium batteries that are transported with these batteries installed. Examples of such items are electrically-powered cars, lawn mowers, wheelchairs, and other mobility aids. Self-propelled vehicles that also contain

an internal combustion engine must be consigned under the entry “Vehicle, flammable gas powered” or “Vehicle, flammable liquid powered”, as appropriate. Except as provided in Special Provision A102, vehicles, machinery and equipment powered by primary lithium batteries that are transported with these batteries installed are forbidden aboard passenger-carrying aircraft.

* * * * *

157 This entry includes hybrid electric vehicles powered by both an internal combustion engine and wet, sodium or lithium batteries installed. Vehicles containing an internal combustion engine must be consigned under the entry “Vehicle, flammable gas powered” or “Vehicle, flammable liquid powered”, as appropriate. Except as provided in Special Provision A102, vehicles powered by primary lithium batteries, that are transported with these batteries installed are forbidden aboard passenger-carrying aircraft.

* * * * *

(2) * * *

A100 Primary (non-rechargeable) lithium batteries and cells are forbidden for transport aboard passenger carrying aircraft. Secondary (rechargeable) lithium batteries and cells are authorized aboard passenger carrying aircraft in packages that do not exceed a gross weight of 5 kg.

A101 A primary (non-rechargeable) lithium battery or cell packed with equipment is forbidden for transport aboard a passenger carrying aircraft unless:

a. The battery or cell complies with the requirements and limitations of § 173.185(b)(1), (b)(2), (b)(3), (b)(4) and (b)(6) or § 173.185(c)(1), (c)(2), (c)(3) and (c)(5) of this subchapter;

b. The package contains no more than the number of lithium batteries or cells necessary to power the intended piece of equipment;

c. The equipment and the battery or cell are packed in a strong packaging;

d. The gross weight of the package does not exceed 5 kg. Packages complying with the requirements of this special provision are excepted from all other requirements of this subchapter.

A102 A primary (non-rechargeable) lithium battery or cell contained in equipment is forbidden for transport aboard a passenger carrying aircraft unless:

a. The battery or cell complies with the requirements and limitations of § 173.185(b)(1), (b)(2), (b)(3), (b)(4) and (b)(6) or § 173.185(c)(1), (c)(2), (c)(3) and (c)(5) of this subchapter;

b. The package contains no more than the number of lithium batteries or cells

necessary to power the intended piece of equipment;

c. The equipment containing the battery or cell is packed in strong packagings; and

d. The net weight of the package does not exceed 5 kg. Packages complying with the requirements of this special provision are excepted from all other requirements of this subchapter.

A103 A secondary (rechargeable) lithium battery or cell packed with equipment is authorized aboard passenger carrying aircraft in packages that do not exceed a gross weight of 5 kg.

A104 A secondary (rechargeable) lithium battery or cell packed in equipment is authorized aboard passenger carrying aircraft in packages that do not exceed a net weight of 5 kg.

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

■ 8. The authority citation for part 173 continues to read as follows:

Authority: 49 U.S.C. 5101–5127, 44701; 49 CFR 1.45, 1.53.

■ 9. In § 173.4, paragraph (d) is added to read as follows:

§ 173.4 Small quantity exceptions.

* * * * *

(d) Lithium batteries and cells are not eligible for the exceptions provided in this section.

■ 10. In § 173.185, the introductory text of paragraph (b) is revised, paragraph (b)(5) is redesignated as paragraph (b)(6), and new paragraph (b)(5) is added; then the introductory text of paragraph (c) is revised, paragraph (c)(4) is redesignated as paragraph (c)(5), and new paragraph (c)(4) is added; and paragraph (d) is revised to read as follows:

§ 173.185 Lithium batteries and cells.

* * * * *

(b) *Exceptions.* Except for primary (non-rechargeable) lithium batteries and cells transported aboard passenger-carrying aircraft, cells and batteries are not subject to any other requirements of this subchapter if they meet the following:

* * * * *

(5) The outside of each package that contains a primary (non-rechargeable)

lithium battery or cell must be marked “PRIMARY LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT” on a background of contrasting color, in letters:

(i) At least 12 mm (0.5 inch) in height on packages having a gross mass of more than 30 kg (66 pounds); or

(ii) At least 6 mm (0.25 inch) on packages having a gross mass of 30 kg (66 pounds) or less; and

* * * * *

(c) Except for primary lithium (non-rechargeable) batteries and cells transported aboard passenger-carrying aircraft, cells and batteries are not subject to any other requirements of this subchapter if they meet the following:

* * * * *

(4) The outside of each package that contains a primary (non-rechargeable) lithium battery or cell must be marked “PRIMARY LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT” on a background of contrasting color, in letters:

(i) At least 12 mm (0.5 inch) in height on packages having a gross mass of more than 30 kg (66 pounds); or

(ii) At least 6 mm (0.25 inch) on packages having a gross mass of 30 kg (66 pounds) or less; and

* * * * *

(d) Except for transportation aboard passenger-carrying aircraft, cells and batteries and equipment containing cells and batteries that were first transported prior to January 1, 1995, and were assigned to Class 9 on the basis of the requirements of this subchapter in effect on October 1, 1993, may continue to be transported in accordance with the applicable requirements in effect on October 1, 1993.

* * * * *

■ 11. In § 173.220, paragraphs (d), (e) and (f) are redesignated as paragraphs (e), (f) and (g) and new paragraph (d) is added to read as follows:

§ 173.220 Internal combustion engines, self-propelled vehicles, mechanical equipment containing internal combustion engines, and battery powered vehicles and equipment.

* * * * *

(d) *Lithium batteries.* Except as provided in § 172.102, Special Provision A102, of this subchapter, vehicles and

machinery powered by primary lithium batteries that are transported with these batteries installed are forbidden aboard passenger-carrying aircraft. Lithium batteries contained in vehicles or engines must be securely fastened in the battery holder of the vehicle or engine, and be protected in such a manner as to prevent damage and short circuits. Lithium batteries must be of a type that have successfully passed each test in the UN Manual of Tests and Criteria as specified in § 173.185, unless approved by the Associate Administrator. Equipment, other than vehicles or engines, containing lithium batteries must be transported in accordance with § 173.185.

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PART 175—CARRIAGE BY AIRCRAFT

■ 12. The authority citation for part 175 is revised to read as follows:

Authority: 49 U.S.C. 5101–5127, 44701; 49 CFR 1.53.

■ 13. In § 175.10, paragraph (a)(27) is added to read as follows:

§ 175.10 Exceptions.

(a) * * *

(27) Except as provided in § 173.21 of this subchapter, consumer electronic and medical devices (watches, calculators, cameras, cellular phones, lap-top computers, camcorders, and hearing aids, etc.) containing lithium cells or batteries, and spare lithium batteries and cells for these devices, when carried by passengers or crew members in carry-on or checked baggage for personal use. In addition, each installed or spare battery must conform to the following:

(i) The lithium content of the anode of each cell, when fully charged, is not more than 5 g; and

(ii) The aggregate lithium content of the anodes of each battery, when fully charged, is not more than 25 g.

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Issued in Washington, DC, on December 10, 2004 under authority delegated in 49 CFR Part 1.

Samuel G. Bonasso,
Deputy Administrator.

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