

Temporary (4 month) Deviation of e-Stewards Standard (V3.1 and V4.0) / Battery Health Criteria

Attn: e-Stewards Certified Recyclers/Refurbishers, Certifying Bodies, Auditors and Inspectors

Date: Effective Immediately, 23 March 2020

Due to the outbreak of the COVID19 Virus and the need in each country where e-Stewards are located to serve the new population of work at home citizens and students, e-Stewards is relaxing their battery health levels as follows until further notice. This is being done for the following reasons: a) to respond to the difficulty in sourcing replacement batteries at this time, b) to assist the population to adjust to the new working and living restraints due to the COVID19 virus, c) to foster reuse of mobile computing devices, and d) to assist the revenue flow for Certified e-Stewards Recyclers and Refurbishers at this economically stressful time. Note that this is a temporary measure with an end date, and can be withdrawn immediately should abuses of the measures be discovered.

Standard Version 3.1

The following language will, until August 1, 2020, amend section 8.6.1 (a)(2-4) as follows:

8.6.1 Test Electronic Equipment and ensure Full Functionality & data sanitization

[...]

2. Fully charge each battery, and then unplug the device and test each battery by using either the free bootable testing software provided by the e-Stewards program administrator (e-Stewards organizations at <http://www.e-stewards.org/learn-more/for-recyclers/toolbox/e-stewards-battery-tester/>) or an equivalent test method that includes the Lucas-Lehmer test (LLT) algorithm as found in Prime95 (see fourth arrow below), as follows:
 - ▶ Determine and record the original design capacity in milliamp hours (mAh) that is recorded on the smart chip for each battery;
 - ▶ Determine and record the last known full capacity (i.e. the reported capacity of the battery at the time of the test) in mAh of each battery, e.g. by reading the smart chip;
 - ▶ Express & record the difference between the two numbers as a percentage of original capacity; and
 - ▶ Perform a 10-minute load test using the Prime95 program at the -t option setting, or an equal or greater load. (This Prime95 program and its specifications are available at www.mersenne.org; Version v28.5 or later shall be used, with the - t setting. An alternate test may be used if it meets the equivalent specifications of Prime95 with the - t setting.). ~~Batteries that run out of power during the 10-minute load test shall not be made available for reuse;~~

3. When a non-removable battery's state of health cannot be determined as required above, utilize reputable third-party software to conduct a pass-fail battery test, ~~only allowing batteries that pass with a 'good' rating to be sent into the reuse market;~~
4. In equipment designed to include both removable and non-removable batteries, non-removable batteries that do not pass the testing may remain in place, as long as full functionality can be achieved using the removable batteries. The existence of a non-removable, non-functioning battery shall be disclosed to the buyer.

[new language as follows]

4. Only batteries that are not visibly damaged and will succeed in completing a circuit to ensure use of the laptop or other mobile computing devices under AC power shall be allowed into the reuse market.
5. In addition to the requirements of shipping documentation found in 8.8.4, all such equipment made available for reuse shall be prominently labelled and appropriately advertised to ensure the receiver/buyer is aware of the results of the battery testing described in 2 and 3 above. Further, a note with the following statement shall accompany each sale/shipment of equipment not meeting the requirements as set in the original version of this section in the e-Stewards Standard:

Battery Recycling: Please be aware that Lithium Ion and other batteries can pose a threat to the environment and yet contain valuable materials. It is important therefore that your battery when ready to be replaced is properly recycled. We recommend delivery of the battery to a Certified e-Stewards Recycler/Refurbisher, or to a Staples store, which has agreed to send it onward to only Certified e-Stewards Recycler/Refurbishers. Thanks for helping e-Stewards keep our Earth safe!

6. Every effort shall be made to ensure that such mobile computing equipment sold with used batteries will remain in the domestic market and will not be sold or shipped across national borders. Online sales of equipment not meeting the battery requirements set in the original version of the e-Stewards Standard shall be restricted to domestic buyers only and receivers/buyers of the equipment shall be assessed for export risk. If there is any reason to believe the equipment will be exported, then the Organization shall take steps to prevent the transaction.

[...]

Standard Version 4.0

The following language will, until August 1, 2020, amend section 8.5.1 (b)(2) as follows:

8.5.1 Test Electronic Equipment and Ensure Full Functionality & Data Sanitization

[...]

2. Fully charge each battery and test to determine its health in terms of both load and capacity as follows:

i. Where feasible:

- A. Determine and record the original design capacity in milliamp-hours (mAh) that is recorded on the smart chip for each battery; and
- B. Determine and record the last known full capacity (i.e. the reported capacity of the battery at the time of the test) in mAh of each battery; and
- C. Express & record the difference between the two numbers as a percentage of original capacity; and
- D. ~~Any battery that is unable to demonstrate its last known full capacity is at least 60% of the original capacity shall be deemed to be a failing battery and not be made available for reuse; and~~
- E. Conduct a 10-minute load test using the Prime95 program at the -t setting option, or an equal or greater load.

NOTE: This Prime95 program and its specifications are available at www.mersenne.org; Version v28.5 or later shall be used, with the -t setting. ~~Batteries that run out of power during the 10-minute load test shall be deemed to be failing and not be made available for reuse.~~

ii. When a battery's state of health or percentage of original capacity cannot be determined as required in i above:

- A. Utilize OEM-provided or third-party validated software to conduct a pass-fail battery test ~~only permitting batteries that pass with a 'good' rating to be sent into the reuse market;~~ or
- B. Establish documented methodology and criteria for determining battery health, based on industry best practices ~~and 60% of the original capacity benchmark; permit only tested batteries that meet these criteria into the reuse market.~~

iii. [new]

- A. Only batteries that are not visibly damaged and will succeed in completing a circuit to ensure use of the laptop or other mobile

computing devices under AC power shall be allowed into the reuse market.

- B. In addition to the requirements of shipping documentation found in 8.5.2.1, all such equipment made available for reuse shall be prominently labelled and appropriately advertised to ensure the receiver/buyer is aware of the results of the battery testing described in i and ii. Further, a note with the following statement shall accompany each sale/shipment of equipment not meeting the requirements as set in the original version of this section in the e-Stewards Standard:

Battery Recycling: Please be aware that Lithium Ion and other batteries can pose a threat to the environment and yet contain valuable materials. It is important therefore that your battery when ready to be replaced is properly recycled. We recommend delivery of the battery to a Certified e-Stewards Recycler/Refurbisher, or to a Staples store, which has agreed to send it onward to only Certified e-Stewards Recycler/Refurbishers. Thanks for helping e-Stewards keep our Earth safe!

- C. Every effort shall be made to ensure that such mobile computing equipment sold with used batteries will remain in the domestic market and will not be sold or shipped across national borders. Online sales of equipment not meeting the battery requirements set in the original version of the e-Stewards Standard shall be restricted to domestic buyers only and receivers/buyers of the equipment will be assessed for export risk. If there is any reason to believe the equipment will be exported, then the Organization shall take steps to prevent the transaction.

[...]

END