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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

LY/T 3240-2020

**Garden machinery - Ride-on lawnmowers with lithium-ion
battery as power source**

园林机械 以锂离子电池为动力源的坐骑式草坪修剪机

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" Drafting.

1 Scope

This document stipulates that with lithium-ion battery as the power source, the operator controls the driving direction through the joystick or steering wheel.

The terms and definitions, model compilation methods, basic parameters, technical requirements and test methods of the shears (hereinafter referred to as "mountain lawn mowers"), Marks, instructions for use, packaging, transportation, storage and handling.

This document applies to mount-type hob lawns powered by a rechargeable lithium-ion battery pack or battery pack with a nominal voltage not greater than 75 V DC Machine and mount-type rotary knife lawn mower.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated reference documents, Only the version corresponding to that date is applicable to this document; for undated references, the latest version (including all amendments) is applicable to this document file.

GB/T 191 Packaging, storage and transportation pictorial signs GB/T 755 Rotating motor rating and performance GB/T 3883.1-2014 Safety of hand-held and portable electric tools and garden tools Part 1: General requirements GB/T 4208 Shell protection grade (IP code)

GB 4343.1 Electromagnetic compatibility requirements for household appliances, electric tools and similar appliances Part 1: Emission GB 9969 General Rules for Use of Industrial Products GB/T 13384 General technical conditions for packaging of mechanical and electrical products GB/T 19841 Technical Requirements for Rotary Mower Blades GB/T 21418 General technical conditions for permanent magnet brushless motor systems GB/T 26572 Limit requirements for restricted substances in electronic and electrical products GB/T 34570.1 Safety of rechargeable battery packs and chargers for electric tools Part 1: Safety of battery packs GB/T 34570.2 Safety of rechargeable battery packs and chargers for electric tools Part 2: Safety of chargers GB/T 38364.3 Garden machinery. Safety requirements for lawn trimmers powered by internal combustion engines. Part 3: Mounted lawn trimmers LY/T 1570 Power lawn and garden machinery control symbols and safety signs LY/T 1621 Garden Machinery Product Model Compilation Method LY/T 1934 Garden machinery mounted lawn trimmer powered by gasoline (diesel) engine SJ/T 11364 Marking requirements for restricted use of hazardous substances in electrical and electronic products IEC 60730-1:2013/AMD 1:2015 Automatic electrical control Part 1: General requirements (Automatic electrical controls-Part 1: General requirements)

3 Terms and definitions

The following terms and definitions defined in GB/T 38364.3 apply to this document.

Nominal voltage

The product of the nominal voltage of a single cell and the number of cells in series.

Note: The unit is volts.

Net mass of the machine in working condition, the quality of the whole machine including the cutting accessories specified in the installation manual [including battery pack (battery pack)].

4 Model preparation method

The preparation method of the product model of the mounted lawn mower is carried out in accordance with the regulations of LY/T 1621.

Mounted lawn mower takes the cutting width (in millimeters) as the main parameter. The model preparation method is shown in Figure 1.

5 Basic parameters

The basic parameters include.

- a) Adapt to the nominal voltage of the battery pack (battery pack), V;
- b) The nominal energy of the adapted battery pack (battery pack), Wh;

- c) Adaptation battery pack (battery pack) model;
- d) Rated parameters and model of the adaptor charger;
- f) Cutting width, mm;
- g) Mowing height or its adjustable mowing height range, mm;
- h) The rated maximum no-load speed of the blade, r/min;
- i) Noise value (A-weighted sound power level), dB;
- j) The volume of the grass collector (if any), L;
- k) Product dimensions (lengthxwidthxheight), mm;
- l) Net weight of the product, kg;
- m) Maximum driving speed, km/h;
- n) Front wheel specifications, cm;
- o) Rear wheel specifications, cm;
- p) The minimum turning radius, m.

6 Technical requirements and test methods

General requirements Mounted lawn mowers should be able to operate normally under the following environmental conditions.

- a) The altitude does not exceed 1,000 m;
- b) The ambient air temperature is -5 °C~40 °C;
- c) The relative humidity of the air does not exceed 90% (25 °C);
- d) The air does not contain flammable and explosive materials;
- e) The slope is not more than 15°, no water, no entanglement (such as vines, ropes, cables, etc.) and easily hit by the blade (such as screws, Artificial maintenance of lawns for stones, etc.);
- f) The height of lawn grass is not more than 300 mm.

Overall performance

6.2.1.1 Requirements

Mounted lawn mowers should be able to start normally under the environmental conditions specified in 6.1.

6.2.1.2.1 Start at room temperature

Place the fully equipped lawn mower at $25\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ for 4 hours, and then start it without load within 10 s after taking it out, and start it continuously.

Move 10 times, and the interval between two consecutive starts is not more than 10 s, and observe whether the starting can be successful each time.

6.2.1.2.2 High and low temperature start

Put the fully equipped lawn mower at $-5\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ and $40\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ for 4 hours, and take it out within 10 s no-load start, continuous start 10 times, and the interval between two adjacent starts is not more than 10 s, and observe whether the start can be successful every time.

6.2.2.1 Requirements

The rated no-load maximum speed of the blade of the mounted lawn mower should be given by the manufacturer in the manual and nameplate, and it is measured at the factory.

The deviation between the maximum no-load speed of the blade and the rated maximum no-load speed should not exceed -5% to 10%.

6.2.2.2 Inspection

According to the regulations of LY/T 1934.

6.2.3.1 Requirements

Mounted lawn mowers should have at least 3 cutting positions, and should be easy to adjust; the actual cutting height of any cutting position is measured and explained the deviation of the given value in the specification should be within $\pm 3\text{ mm}$.

6.2.3.2 Inspection

When checking the cutting height, the mounted lawn mower should be placed on a level ground or a special measuring platform, and adjusted to each cut according to the instructions.

For cutting position, measure the distance from the blade tip to the ground or platform at each cutting height, and take the minimum value measured as the cutting height value.

6.2.4.1 Requirements

For mounted lawn mowers with grass collectors, the amount of fragments that can be collected in the grass collectors should not be less than 80% of the nominal capacity of the