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

LY/T 3238-2020

**Forestry machinery - Gasoline engine powered movable hand
operated fertilizer by hole drilling
(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 specifies the terms and definitions of a portable walk-behind digging fertilizer applicator powered by a gasoline engine (hereinafter referred to as the "pit digging fertilizer applicator").

Definition, model establishment, technical parameters, technical requirements and test methods, signs, instructions for use, packaging, transportation and storage.

This document is applicable to the movable walk-behind digging and fertilizing machine with support for digging and fertilizing fruit trees in mountainous and hilly areas.

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 4269.5 Operator control symbols and other markings for portable forestry machinery GB/T 5390 Forestry and Gardening Machinery Engineering Method for the Determination of Noise from Portable Hand-held Operation Machinery Powered by Internal Combustion Engines (Level

2 Accuracy) GB/T 5395 Forestry and Garden Machinery Vibration Measurement Specification for Portable Hand-held Operation Machinery Powered by Internal Combustion Engines, Handle Vibration GB/T 9480 Rules for the compilation of manuals for agricultural and forestry tractors and machinery, lawn and garden power machinery GB 10395.1 Agricultural and Forestry Machinery Safety Part 1: General Principles GB 10396 General rules for safety signs and hazard graphics for agricultural and forestry tractors and machinery, lawn and garden power machinery GB/T 13384 General technical conditions for packaging of mechanical and electrical products GB/T 16623 Technical specification for press-fit solid tires GB 26133 Limits and measurement methods for exhaust pollutants from small ignition engines for non-road mobile machinery (China's first and second-order segment) GB/T 26443 Safety colors and safety signs Classification, performance and durability of safety signs JB/T 5135.1 General Small Gasoline Engine Part 1: Technical Conditions JB/T 5135.2 General Small Gasoline Engine Part 2: Bench Performance Test Method JB/T 5135.3 General small gasoline engine Part 3: Reliability and durability test and evaluation method LY/T 1486 Forestry Machinery Portable Digger

3 Terms and definitions

The following terms and definitions defined in LY/T 1486 apply to this document.

Digging fertilizer applicator Move to the digging fertilization site by a single person hand-in-hand or hand-pushing. The digging fertilization head is supported by a bracket and equipped with a quantitative discharging device (by fertilizer the hopper, bottomless discharge box, fertilizer quantitative control device, and guide trough are composed of components, and the fertilization amount can be adjusted according to the needs.

Set), a hand-held machine that realizes vertical digging and fertilization operations (see Figure 1).

Description of indexing sequence number.

4 Model establishment

The digging fertilizer applicator takes the volume of the fertilizer tank (in cubic meters) as the main parameter, which is expressed by the value of the fertilizer tank volume multiplied by 100. The specific model the preparation method is shown in Figure 2.

Example. WFJ-2 means a digging fertilizer applicator with a bracket with a fertilizer tank capacity of 0.02 m³.

5 Technical parameters

Whole machine

The main technical parameters of the whole machine are as follows.

- a) Operating efficiency, each pit per hour;
- b) Net weight of the whole machine, kg;
- c) Ear noise (A-weighted sound pressure level), dB;
- d) Volume of fertilizer tank, m³;
- e) The maximum adaptable drill bit diameter, mm;
- f) Overall dimensions (lengthxwidthxheight), mm.

Supporting power

The main technical parameters of supporting power are as follows.

- a) Gasoline engine model;
- b) Displacement, mL;
- c) Rated power/speed, kW/(r/min);
- d) Maximum torque/maximum torque speed, N·m/(r/min);
- e) Volume mixing ratio of fuel oil and lubricating oil (only applicable to two-stroke gasoline engines);
- f) Fuel tank volume, mL;
- g) Carburetor type.

6 Technical requirements and test methods

General requirements

6.1.1

The digging and fertilizer applicator should be able to work normally under the natural environmental temperature of 0 °C ~ 40 °C.

6.1.2

Site conditions. The soil moisture content is 10%-40%, the soil firmness is 1,000 kPa~1 800 kPa, and the gravel content is less than 5%.

The slope of the work site is not more than 30°.

6.1.3

The altitude does not exceed 1,000 m.

6.1.4

The minimum accuracy of test instruments shall meet the following requirements.

- a) Tachometer. accuracy $\pm 0.5\%$;
- b) Timer. accuracy ± 0.1 s;
- c) Straightedge. the accuracy is ± 0.5 mm;
- d) Inclinator. accuracy $\pm 0.2^\circ$;
- e) Soil firmness meter. accuracy $\pm 1\%$;
- f) Weighing instrument. accuracy ± 0.5 kg;
- g) Vernier caliper. accuracy ± 0.02 mm;
- h) Wide seat square ruler. accuracy level 1.

Matching gasoline engine

6.2.1 Requirements

The gasoline engine supporting the digging and fertilizing machine should meet the requirements of JB/T 5135.1.

6.2.2 Inspection

The performance test of the gasoline engine is carried out in accordance with the regulations of JB/T 5135.2 and JB/T 5135.3.

Overall performance

6.3.1.1 Requirements

The starting performance of the digging fertiliser applicator should meet the requirements of JB/T 5135.1.

6.3.1.2 Inspection

The start performance test of the digging fertilizer applicator is carried out in accordance with the regulations of JB/T 5135.2.

6.3.2.1 Requirements

The minimum no-load stable speed of the digging fertilizer applicator should meet the requirements of JB/T 5135.1.

6.3.2.2 Inspection

The minimum no-load stable speed test of the digging fertilizer applicator is carried out in accordance with the regulations of JB/T 5135.2.