

STATUTORY INSTRUMENTS SUPPLEMENT

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S T A T U T O R Y I N S T R U M E N T S

2011 No. 26.

**The Weights and Measures (Dispensing Pumps, Bulk Meters and Bulk Measures) (Amendment) Rules 2011.**

*(Under sections 33 and 43 of the Weights and Measures Act, Cap.103)*

IN EXERCISE of the powers conferred on the Minister by sections 33 and 43 of the Weights and Measures Act, these Rules are hereby made this 30th day of March, 2011.

**1. Title**

These Rules may be cited as the Weights and Measures (Dispensing Pumps, Bulk Meters and Bulk Measures) (Amendment) Rules 2011.

**2. Amendment of S.I No. 33 of 2007**

The Weights and Measures (Dispensing Pumps, Bulk Meters and Bulk Measures) Rules, 2007 in these Rules referred to as the principal Rules are amended as follows—

- (a) in rule 63, by substituting for the word “quality” the word “quantity” wherever it occurs in the rule;
- (b) in rule 66(2) by substituting for “Director” the words “Executive Director”;
- (c) in rule 76—
  - (i) in the head note by substituting for “or” the word “of”;

- (ii) in rule 76(2)(b) by substituting for “084” the figure “0.84”;
- (d) in rule 77—
  - (i) by substituting for the head note “Calibration Certification” the following—

“Certificate of verification”.
  - (ii) in rule 77(1) by substituting for “Calibration” second occurring, the word “verification”.

### **3. Insertion of new Rule 78A**

The principal Rules are amended by inserting immediately after rule 78 the following—

#### **“78A Evidence of verification essential for custody transfer**

(1) A person who loads or causes to load, unloads or causes to unload any of the fuels mentioned in rule 76(2) into or from a bulk measure without a valid verification certificate issued under rule 77 commits an offence and is liable on conviction to imprisonment not exceeding three months.

(2) A person who unloads or causes to unload any of the fuels mentioned in rule 76 (2) from a bulk measure that does not have a valid verification certificate issued under rule 77 shall notify the inspector of the need to verify the bulk measure.

(3) A person who fails to notify the inspector under rule 78 (2) commits an offence and is liable on conviction to imprisonment not exceeding three months.

(4) The notification mentioned in subrule (2) shall be issued to the inspector in writing, and any other means possible within twenty four hours after unloading the fuel and shall be in the form provided in Schedule 3.

(5) Without prejudice to sub-rule (4), any other faster means of communication to the inspector may be used in addition to the written notice provided under Schedule 3.

(6) A bulk measure in respect of which a notice of verification has been issued shall not be loaded until the verification has been carried out in accordance with these Rules.

(7) A person who fails to comply with subrule (6) commits an offence and is liable on conviction to imprisonment not exceeding three months.”

#### **4. Insertion of new Part VI in principal Rules**

The principal Rules are amended by inserting immediately after Part V the following—

### “Part VI—Dipstick Measuring Systems

#### **80. Definition of dipstick**

A dipstick means a metal bar of brass or any other suitable hard material that is used to determine the depth of a liquid in a tank.

#### **81. Information on dipstick**

The dipstick shall carry the following information—

- (a) Vehicle registration number;
- (b) TT- mark;
- (c) Compartment number;
- (d) Verification number;
- (e) Graduations.

#### **82. Dipstick-compartment relationship**

Each dipstick shall relate to, and be used for measuring the quantity of fuel in one compartment only.

#### **83. Shape of dipstick**

- (1) The dipstick shall be straight and free from flaws.
- (2) The following cross-sectionals shall apply, round (solid), square, L-section, and T-section of brass or any other non-ferrous material.

(3) The cross-sectional area of a dipstick shall not exceed 5 cm<sup>2</sup>.

(4) To avoid warping or bending L-section dipsticks shall be reinforced with hard wood.

#### **84. Graduations**

(1) The unit of measurement shall be the litre.

(2) The graduation lines indicating the tank capacities shall be straight and at right angles to the axis of the face of the dipstick and shall extend across the full width.

(3) The graduation shall be in a reasonable and convenient scale.

(4) All scale marks, letters, and figures shall be legible and permanently marked.

(5) Each scale mark shall be not less than 1 mm deep and not less than 1 mm nor more than 1.5 mm wide.

(6) Major scale marks shall be numbered by figures not less than 6 mm high, with lines not less than 1 mm deep and not less than 1 mm nor more than 1.5 mm wide.

(7) The figures shall be placed immediately above the scale marks to which they relate.

#### **85. Guide tube**

(1) Each compartment shall be fitted with a fixed vertical dipstick guide tube positioned in such a manner that the dipstick can pass as nearly as practicable through the centre of the volume of the compartment.

(2) The tube shall be of sufficient length and diameter so as to be able to guide the dipstick to move vertically square to the horizontal plane of the tank to the bottom.

(3) The tube shall always be perforated to check capillary attraction.

(4) At the top of the dipstick guide tube, there shall be provided a flat surface to create a datum surface, which shall consist of an annulus not less than 5 mm in width.

### **86. Landing plate**

(1) At the bottom of each compartment there shall be a landing plate unto which the dipstick shall drop and rest before measurement is taken.

(2) The landing plate shall be of a thickness equal or greater than 4 mm but not exceeding 6 mm.

### **87. Tank number**

The related tank number shall be conspicuously marked at the crosspiece end of the blade of the dipstick in figures not less than 6mm high.

### **88. Tank capacity**

(1) The nominal capacity and the minimum quantity of fuel which may be delivered by the use of a dipstick from each compartment shall be marked legibly, conspicuously and permanently on the same side of the tank as the outlet valves.

(2) Where more than one compartment discharges through a common outlet manifold, means shall be provided to prevent liquid flowing from one compartment into another compartment.

### **89. Tank construction**

(1) Tanks and compartments shall be so constructed that—

(a) the linear dimensions of a compartment when empty, partly filled or full shall not vary by more than 1 part in 1,000;

(b) the prescribed limits of error at any scale mark shall not be exceeded regardless of whether the adjacent compartments are empty or contain liquid;

(c) the tank shall be made of any metal, alloy or synthetic material that is suitable for the type of liquid it is intended to carry and those materials shall possess sufficient strength, durability, and stability and a coefficient of linear expansion not exceeding  $25 \times 10^{-6}/^{\circ}\text{C}$ .

(2) Each compartment shall be so shaped and constructed that, when the vehicle is standing on a level surface, no air pockets form on filling and no liquid is retained on discharge.

(3) Any baffles or stiffeners inside a compartment shall be so shaped and perforated that they do not interfere with its filling or emptying.

(4) The emptiness of a compartment and its associated discharge pipes shall be easily verifiable.

## **90. Calibration chart**

(1) All tanks shall after calibration be accompanied by a calibration chart stamped by an Inspector of Weights and Measures upon verification of the measure.

(2) The calibration chart shall be printed on classic serialized paper provided by the Department of Weights and Measures

## **91. Information on the chart**

The calibration chart shall carry the following information—

(a) name and address of the calibrator;

(b) name and address of the equipment owner;

(c) registration number of the vehicle;

(d) number of compartments;

(e) calibration date and date of recalibration;

(f) verification number;

(g) table containing calibration data litres against length in mm.

## **92. Tank to carry valid calibration chart**

Every tank shall carry a valid original calibration chart at all times.

## **93. Calibration procedure**

(1) Vehicle tanks used as measures shall be calibrated as capacity measures.

(2) In the case of meter equipped tanks the meter shall be treated as a separate measuring instrument for the purposes of calibration.

(3) The compartment capacity or capacities shall be taken as including the capacities of the delivery lines leading from the emergency, safety or master valve to the outlet valve or discharge valve except that in the case of vehicle compartment terminating in a single delivery pipeline fitted with an outlet valve, the compartment capacity or capacities shall be taken as excluding the capacity of the delivery pipeline but a notice shall be prominently exhibited on the vehicle tank indicating clearly and indelibly the following—

(a) marked capacity includes capacity of delivery line; or

(b) marked capacity excludes capacity of delivery line as the case may be.

(4) The safety or master valve shall be positioned at the lowest point of the outlet from the compartment.

(5) The proving measure of bulk meter should be mounted on an overhead gantry or a separate framework in a convenient position above a firm and level platform, preferably of concrete on which the vehicle stands during calibration.

(6) The vehicle shall be placed in a level position before commencing calibration as the accuracy of calibration depends on the level of the tank; the sequence in which compartments are calibrated should be such as to minimize unequal spring deflection on the axles of the vehicle.

(7) The front and rear tyres of the vehicle shall be at the correct pressures. The tyres shall be inspected for wear and tear which should be reasonably even and there shall not be excessive difference in the tread between the front set of tyres and the rear set at the time of calibration.

(8) The interior of the compartment shall be inspected and cleaned where necessary.

(9) Before starting calibration the pipelines, outlet valves and other connections shall be tested against leakage by partially filling and draining each compartment in turn through the outlet valve.

(10) During the process sufficient quantity of the testing medium should be introduced inside the compartment to wet the internal surface of the tank and pipelines.

(11) After taking the precautions mentioned above, the compartment to be calibrated shall be incrementally filled with appropriate proving measures or bulk meters in steps up to the marked capacity of the compartment with the delivery lines leading to the outlet valve full or empty as provided in subrule (3).

(12) The ullage mark shall be taken carefully and the line shall be cut on the ullage stick at right angles to the axis with the help of tri-square and scribe. If an ullage indicator is used, it shall be correctly set and sealed.

(13) A mark shall also be on the dipstick to indicate the "proof level". In the case of ullage stick, the distance from the ullage point to the T-joint shall be marked on the stick.

(14) The dipstick shall as well be marked to indicate incremental volumes up to full tank/compartment capacity.

(15) The sequence for calibrating compartments should be in sequence of filling them.



(16) The sequence of discharge shall be in the reverse order to that filling.

(17) Each compartment shall be left full before proceeding to the next in sequence.

#### **94. Marking**

(1) The vehicle shall have a brass plate riveted in a prominent position, to receive the Inspector's stamps.

(2) The brass plate shall bear the following particulars—

(a) the words "Weights and Measures Act";

(b) name of owner of vehicle;

(c) vehicle registration number;

(d) the serial number and capacity of each compartment.

(3) Space should be provided on the plate for the Inspector's stamps.

(4) A sample design for a brass plate is shown under Schedule 4.

(5) The capacity of the compartment shall be indelibly marked on the manhole cover of the compartment and also painted on each side of the compartment so that it is clearly visible. If there is more than one compartment, then each compartment shall have its capacity marked separately as above and the compartment numbered serially.

(6) The number of the compartment shall also be marked on the discharge valve pertaining to the compartment.

(7) The vehicle registration number as well as the capacity of the compartment shall be indelibly marked on the dip stick at the top end.

(8) If there is more than one compartment, the different faces of one dip stick may be used for markings and each face shall bear the vehicle number, the serial number of the compartment, the proof and dip lines of that compartment and the capacity of the compartment.

## 95. Dipstick testing

(1) Except in the case of a replacement dipstick tested by reference to a calibration chart certified and mentioned in subrule (2), a dipstick relating to a compartment shall be tested by inserting into the compartment known volumes of liquid and determine the position of the scale mark on the dipstick when the road tanker is on a level surface.

(2) The known volumes in subrule (1) shall be determined using—

- (a) local standards of capacity; or
- (b) a reference meter; or
- (c) other equipment, being measures of capacity forming part of a fixed installation or being mounted on a vehicle or trailer, which the inspector considers suitable, and adjusted so as not to have any apparent error, within the last twelve months.

(3) A replacement dipstick shall be tested by comparing the distance of every scale mark from datum surface with that given on the calibration chart certified by an inspector as accurate at the time of a testing in accordance with subrule (1); unless any alteration, addition, damage or repair has been effected to the compartment which in the opinion of the inspector has invalidated the calibration chart, and in that case the dipstick measuring system shall be **tested** in accordance with subrule (1).

(4) Not more than two dipsticks relating to a compartment may be passed as fit for use for trade on any one occasion.

96. Tanks submitted for testing shall be tested in a clean condition.

**5. Amendment of Schedule 1 to principal rules**

The principal Rules are amended in Schedule 1 by revoking each full stop appearing after each of the symbols appearing in that Schedule.

**6. Insertion of new Schedules 3 and 4**

The principal Rules are amended by inserting immediately after the Second Schedule the following—

**“SCHEDULE 3**

**RULE 78 A (4)**

**ROAD TANK VERIFICATION NOTICE**

The inspector’s attention is drawn to the fact that a road tank in use for trade and of the under mentioned particulars does not bear a valid verification status.

Registration No:.....

Type/Make:.....

Outlet to which the last delivery was made:.....

:.....Located at.....Town/City.....

For: Manager  
(Name).....Signature.....

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For official use only

Inspector’s comments

SCHEDULE 4

THE WEIGHTS AND MEASURES ACT, CAP 103

RULE 94 (2)

SAMPLES DESIGN FOR BRASS PLATE

Name of the Company: .....

Vehicle tank No. ....

Name of plate .....

Compartment Number	Compartment Capacity (Litres)	Inspector's Stamp

HON. KAHINDA OTAFIIRE, (MAJ GEN)  
*Minister of Tourism, Trade and Industry.*