

## 1. General

### **Code Reference: G-S.1. Identification**

Virtually all weighing and measuring equipment must be clearly and permanently marked with, or display, the manufacturer's name or trademark, model designation, and serial number. Service station dispensers, consoles, cash registers interfaced with dispensers, retrofit computing registers, and customer card-activated terminals must all have these markings.

### **Marking of Serial Number:**

As a practical matter, some equipment need not have a serial number. "Satellite" modules in a modular system (e.g., keyboard module and cash drawer) need not have serial numbers because they do not have any "intelligence." A serial number is required in the following circumstances:

#### **Separate Device**

A device is capable of operating as a weighing or measuring device without interfacing with or connecting to other components.

#### **Separate Main Element**

Primary indicating elements must be marked. The device is a major element in the weighing or measuring system, which means, it is metrologically significant to the operation and/or performance of the system and interfaces with different compatible main elements. Examples include the following: indicating elements, weighing elements, meter registers, meter measuring elements (vehicle tank meters and loading rack meters.)

#### **Component**

The device is a component in a system, may be used in different models of devices, and is sufficiently complex to warrant a separate evaluation and a separate CC (e.g., load cells and vapor recovery nozzles.) Such a device may or may not be placed into an enclosure with other components of the system. When installed in an enclosure, the complete device must be marked with a serial number, and the one serial number will suffice for the entire collection of components. If not placed in an enclosure with other components, the component must be marked with a serial number.

The following are examples of the application of these criteria:

#### **Retail Motor Fuel Dispensers:**

- Whole unit requires a serial number.
- Indicating elements do not require a separate serial number.
- Measuring element does not require a separate serial number.
- The measuring element is metrologically significant because it affects the operation of the system as a whole; however, it is always enclosed in a housing, which has a S/N for the whole device.

*Note: A conventional nozzle on a retail motor fuel dispenser is not a sufficiently complex device to warrant a special type evaluation or a serial number. The nozzle does not affect the accuracy of the delivery. A separate requirement addresses the anti-drain valve. A vapor recovery nozzle does warrant a separate evaluation because it is a complex device, and it does have the potential to affect the accuracy of the device during the normal operation of the device. One model of vapor recovery nozzle can be used on many models of dispensers. The proper operation of a vapor recovery nozzle and system is "important" as defined by federal regulations. Thus, it is reasonable to require a vapor recovery nozzle to be marked with a serial number.*

**Vehicle Tank Meters**

- Serial number is required on the meter; it is a major component of the system since it is required for the system to operate.
- Serial number is required on the indicating elements.

Equipment must be marked on a surface that is an integral part of the device, and the marking must be visible after installation. If the required information is not positioned in a visible location after installation, a duplicate, permanent identification badge must be located in a visible location after installation. A removable cover is an acceptable location for the required information only if a permanent ID badge is located elsewhere on the device.

~~The information may be on a metal or plastic plate that is attached with pop rivets, adhesive, or other means, but removable bolts or screws are not permitted. A foil or vinyl badge may be used provided that it is able to survive wear and tear, remains legible, and is difficult to remove. The printing on a foil badge must be easily readable and not easily obliterated by rubbing with a relatively soft object (e.g., the wood of a pencil.)~~

Location of the information:

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**Required Markings:**

All equipment shall be clearly and permanently marked on an exterior surface that is visible after installation with the following information (prefix lettering may be initial capitals, all capitals, or all lower case):

- 1.1. The name, initials, or trademark of the manufacturer or distributor.  Yes  No  N/A
- 1.2. A model identifier that positively identifies the pattern or design of the device. The model identifier shall be prefaced by the word "Model," "Type," or "Pattern." These terms may be followed by the word "Number" or an abbreviation of that word. The abbreviation for the word "Number" shall, as a minimum, begin with the letter "N" (e.g., No or No.) The abbreviation for the word "Model" shall be "Mod" or "Mod." Prefix lettering may be initial capitals, all capitals, or all lower case.  Yes  No  N/A
- 1.3. Except for equipment with no moving or electronic component parts and not built for purpose, software-based devices, a non-repetitive serial number. The serial number shall be prefaced by the words "Serial Number" or an abbreviation, or a symbol, that clearly identifies the number as the required serial number. Abbreviations for the word "Serial" shall, as a minimum, begin with the letter "S," and abbreviations for the word "Number" shall, as a minimum, begin with the letter "N" (e.g., S/N, SN, Ser. No, and S No.)  Yes  No  N/A
- 1.4. For not built-for-purpose, software based devices the current software version designation. The version or revision identifier shall be prefaced by the word "Version" or "Revision" as appropriate and either word may be followed by the word "Number." The abbreviations for the word "Version" shall, as a minimum, begin with the letter "V." Abbreviations for the word "Revision" shall, as a minimum, begin with the letter "R." The abbreviations for the word "Number" shall, as a minimum, begin with the letter "N" (e.g., No or No.)  Yes  No  N/A

**Location and Visibility of Marking Information:**

Required information shall be clearly and permanently marked on an exterior surface that is visible after installation as follows:

- 1.5. Equipment must be marked on a surface that is an integral part of the device.  Yes  No  N/A

Location of Marking Information: \_\_\_\_\_

- 1.6. Markings must be visible after installation. If the required information is not positioned in a visible location after installation, a duplicate, permanent identification badge must be located in a visible location after installation. A removable cover is an acceptable location for the required information only if a permanent ID badge is located elsewhere on the device.  Yes  No  N/A

**Permanence of Marking Information:**

"Permanent" markings address two aspects: (1) if the markings are on a plate or badge, then the marking badge must be "permanently" attached to the device, and (2) the printed information will withstand wear and cleaning.

The identification marking must be permanent, able to survive normal wear and tear, and remain legible. If located on a metal or plastic plate or badge, it must be attached with pop rivets or adhesive, or equivalent permanent means; removable bolts or screws are not permitted. A foil badge is permitted provided that it is durable, is able to survive wear and tear, remains legible, is difficult to remove, and exhibits obvious evidence of an attempt to remove the marking or badge. The printing on a foil badge must be easily readable and not easily obliterated by rubbing with a relatively soft object (e.g., the wood of a pencil).

**Permanence of Attachment of Badge:**

- 1.7. Attempt to remove the badge by pulling it off or prying off a metal badge that is attached using only adhesive; removal must be "difficult" at all temperatures. If the badge can be removed, it must show obvious evidence that the badge was removed. Acceptable indications are destruction of the badge by tearing, permanent and extensive wrinkling, or repeated exposure of the word "VOID" upon removal of the badge.  Yes  No  N/A

If required markings are behind a door or panel, the manufacturer is encouraged to put a label on the outside of the device that explains where the ID information is located.

- 1.8. If the information required by G-S.1. is placed on a badge or plate, the badge or plate must be permanently attached to the device. See criteria above for permanence of Attachment of Badge.  Yes  No  N/A
- 1.9. If the markings for other than device identification required by G-S.1. is placed on badge or decal, then the badge or decal must be durable (difficult to remove at all temperatures.)  Yes  No  N/A

**Permanence of Lettering:**

The following test procedure shall be used to determine the permanence of the identification markings. The lettering for the markings is subjected to the following tests to simulated accelerated wear. The markings are then compared with a typical set of labels exhibiting various degrees of wear, graded from minimal effect (7) to excessive unacceptable wear (1).

Attempts are made to remove the marked information whether on a badge (plate) or on the device itself, using the following means.

- Rub over one letter of the marking at least 20 times using an ink eraser in the same manner and

force as one would normally exert while erasing an inscription written with a ball point pen.

- Note: For consistency of application, all NTEP labs use Eberhard Faber ink eraser type #110
- Clean the marking or badge with the following cleaners presumed to be "readily available."

Marking information remains legible after following the above procedures using:

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| 1.10. Disinfecting cleaning liquid and a damp cloth.     | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 1.11. "Soft" household cleaning powder and a damp cloth. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 1.12. Window cleaning fluids and a damp cloth.           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |

Note: For consistency of application, NTEP labs use "409," Bon Ami, and Windex brands of products for tests in parts 1.8, 1.9, and 1.10 respectively.

**Code Reference: G-S.1. (e)**

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| 1.13. An NTEP Certificate of Conformance (CC) Number or a corresponding CC addendum number for devices that have (or will have) a CC. The number shall be prefaced by the terms "NTEP CC," "CC," or "Approval." These terms may be followed by the word "Number" or an abbreviation for the word "Number." The abbreviation for the word "Number" shall as a minimum begin with the letter "N" (e.g., No or No.) | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
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The device must have an area, either on the identification plate or on the device itself, suitable for the application of the Certificate of Conformance Number. If the area for the CC number is not part of an identification plate, then note its intended location below and how it will be applied.

- 1.13.1. Location of CC Number if not located with the identification information:

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**Code Reference: G-S.1.1. Location of Marking Information for Not Built-for-Purpose, Software-Based Devices**

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| 1.14. For not built-for-purpose, software-based devices the following shall apply:   |   |
| 1.14.1. The required information in G-S.1 Identification. (a), (b), (d), and (e) shall be permanently marked or continuously displayed on the device. <b>OR</b>  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 1.14.2. The Certificate of Conformance Number shall be:  |   |
| 1.14.2.1. Permanently marked on the device. <b>OR</b>  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 1.14.2.2. Continuously displayed. <b>OR</b>  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 1.14.2.3. Accessible through an easily recognized menu and, if necessary, a submenu. Examples of menu and submenu identification include, but are not limited to "Help," "System Identification," "G S.1. Identification," or "Weights and Measures Identification." | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |

*Note: For (1.6.2.), clear instructions for accessing the information required in G-S.1. (a), (b), and (d) shall be listed on the CC, including information necessary to identify that the software in the device is the same type that was evaluated.*

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| 1.15. The identification badge must be visible after installation. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 1.16. The identification badge must be permanent.                  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |