



Bulletin

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Alterations to Previously Certified Weighing Devices or Systems Requiring Recertification

1.0 Purpose

The purpose of this bulletin is to establish when a weighing device or system requires a new inspection subsequent to being altered from that which was previously certified. The bulletin will also address what constitutes an acceptable or unacceptable configuration change.

2.0 Background

Section 8 of the *Weights and Measures Act* requires that a weighing device be approved and certified prior to being used in trade. After weighing devices/systems are initially inspected and put into service, they sometimes undergo certain configuration or installation changes which may affect their ability to comply with applicable requirements. For example, line speeds of in-motion scales that are increased (within approved limitations) above the speed at which they were previously certified. Such scenarios are not limited to the approved parameters but also encompass situations where device installations are physically altered to become significantly different and possibly subject to additional requirements. An example of this would be a vehicle scale that was certified as an attended scale then converted to unattended operation.

3.0 Definitions

This bulletin applies to both *Automatic Weighing Devices* and *Non-Automatic Weighing Devices*. The terminology for these two device classifications may vary. For purposes of this bulletin, the following are considered equivalent:

Parameter	Symbol (NAWDS)	Calculation
Scale Capacity	Max	
Actual Scale Interval	d	
Verification Scale Interval	e	
Minimum Scale interval	e_{min}	
Number of Scale intervals	n	n = Max/e
Maximum number of Scale Intervals	n_{max}	

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4.0 Alterations Requiring Re-certification

The following outlines various alterations or modifications that require re-certification and the applicable tolerance. Should there be any question whether or not an inspection is required or what tolerances are applicable, the Regional Gravimetric Specialist should be contacted.

4.1 Alterations that subject a device to additional requirements that do not affect the metrological performance of the device shall be subject to In-Service Limits of Error upon re-certification. Such alterations include, but are not limited to, the following:

- converting a vehicle scale from attended to unattended operation;
- altering the product flow path on an Automatic Discontinuous Totalizing (closed) Weighing system (bulkweigher) such as those located in primary grain elevators.

4.2 Alterations that affect the metrological performance or require the application of performance tolerances different from those originally applied shall be subject to the applicable Acceptance Limits of Error upon re-certification. Such alterations include, but are not limited to, the following:

- increasing operating speeds of in-motion scales beyond the originally certified speed, but still within approved limitations;
- physically altering the load receiving element of a class approved device from that which was originally certified, such as increasing its length or width;
- changing a static weighing system to a dynamic weighing system, provided the system has been approved for dynamic operation;
- increasing the scale capacity (**Max**) or decreasing the actual scale interval (**d**) beyond those for which the device was originally certified.

4.3 Alterations that cause metrological parameters to fall outside those evaluated at the time of approval examination, requires the device to be resubmitted for approval evaluation (e.g. increasing n_{max} or converting static weighing devices to dynamic applications.)

4.4 Capacity (**Max**) and Actual Scale Interval (**d**)

4.4.1 When a device is initially inspected, any scale capacity is acceptable provided:

(a) it is equal to or less than:

- (i) the maximum capacity (**Max**) stated in the Notice of Approval(s); or
- (ii) the maximum capacity (**Max**) stated by the device manufacturer, for the type or design of device, in the case of a class approved device;
- (iii) the maximum number of scale intervals (**n**) stated or implied in the Notice of Approval(s);

(b) the scale capacity (**Max**), the actual scale interval (**d**) and the resulting number of scale intervals (n_{max}) fall within the parameters for which the device was approved.

NOTE: At the time of initial inspection, nameplates are to be appropriately marked. The capacity (**Max**) and scale interval markings (**e**) adjacent to the weight display are to reflect initially inspected (certified) values.

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4.4.1.2

Subject to section 172 of the *Weights and Measures Regulations* and all relevant Specifications, when a device is initially inspected, any scale interval is acceptable provided:

- (a) it is equal to or greater than:
 - (i) the verification scale interval (**e**) stated in the Notice of Approval(s); or
 - (ii) the minimum scale interval (**e_{min}**) determined by the device manufacturer, for the type or design of device, in the case of a class approved device;
 - (iii) the maximum number of scale intervals (**n**) stated or implied in the Notice of Approval(s);
- (b) the scale capacity (**Max**), the actual scale interval (**d**) and the resulting number of scale intervals (**n**) fall within the parameters for which the device was approved.

4.4.1.3

Where a trader wishes to increase the certified scale capacity (**Max**) or decrease the actual scale interval (**d**), of a previously inspected device, a new inspection is required and the following conditions apply:

- (a) the scale capacity can be increased to any capacity that is equal to or less than:
 - (i) the maximum capacity (**Max**) stated in the Notice of Approval(s); or
 - (ii) the maximum capacity (**Max**) stated by the device manufacturer, for the type or design of device, in the case of a class approved device;
- (b) the scale interval can be decreased to any value that is equal to or greater than:
 - (i) the verification scale interval (**e**) stated in the Notice of Approval(s); or
 - (ii) the scale interval determined by the device manufacturer, for the type or design of device, in the case of a class approved device;
 - (iii) in the case of an Automatic Weighing Device, the new scale interval is in accordance with the relevant requirements of the Regulations and Specifications.
- (c) the number of scale intervals (**n**) shall not exceed the maximum number (**n_{max}**) stated or implied in the Notice of Approval(s);
- (d) the scale capacity (**Max**), the actual scale interval (**d**) and the resulting number of scale intervals (**n**) must fall within the parameters for which the device was approved;
- (e) all markings must be updated to reflect the new scale configuration.

4.4.1.4

Where a trader wishes to decrease the capacity (**Max**) or increase the actual scale interval (**d**), of a previously inspected device, a new inspection is not required, however the following conditions apply:

- (a) the scale capacity (**Max**), the actual scale interval (**d**) and the resulting number of scale intervals (**n**) must fall within the parameters for which the device was approved;
- (b) in the case of an Automatic Weighing Device, the new scale interval is in accordance with the relevant requirements of the Regulations and Specifications.
- (c) all markings must be updated to reflect the new scale configuration.

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5.0 Revisions

The purpose of this revision is to add the word Regulations in section 4.4.1.2.

The purpose of revision 3 was to:

To simplify the requirements regarding Alterations to Previously Certified Weighing Devices or Systems Requiring Recertification.

The purpose of revision 2 was to:

Broaden the scope of the bulletin to incorporate inspection requirements applicable subsequent to the alteration of previously certified weighing devices or systems.

The purpose of revision 1 was to:

(a) update the requirements as a result of the coming into force of the *Specifications Relating to Non-Automatic Weighing Devices*; and

(b) update the marking requirements to reflect the philosophy introduced with the *Specifications Relating to Non-Automatic Weighing Devices*.

6.0 Additional Information

For additional information regarding this bulletin, please contact the Senior Program Officer for electricity or gas measurement. For more information regarding Measurement Canada and its programs, visit our Web site located at <http://mc.ic.gc.ca/>.

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