Weights and Measures Ministerial Specifications

SGM-1

Relating to the Design, Composition, Construction and Performance of Electronic Computing Automatic Weighing Devices (SI/98-27)

SHORT TITLE

1. These specifications may be cited as the *Weights and Measures Specifications SGM-1*.

AUTHORITY

2. These Specifications are established pursuant to section 13 of the *Weights and Measures Regulations*, C.R.C., c. 1605. (SI/98-27)

INTERPRETATION

3. In these Specifications, "scale" means any automatic weighing machine to which these Specifications apply. (SI/98-27)

APPLICATION

4. Except as may otherwise be allowed by a Notice of Approval these specifications apply to any electronic digital indicating computing scale capable of use in trade with electronic components that has minimum increments of registration of 0.01 pound or less and 10 grams or less; these specifications are to be read in conjunction with the *Weights and Measures Act* and *Weights and Measures Regulations*.

MOTION DETECTION

5. Except as may otherwise be allowed by a Notice of Approval, a scale shall incorporate a non-operator controlled motion detector to prevent the recording of a weight signal until the load receiving element is stable within $\pm$ 1 minimum increment of registration.

5.1 The load receiving element shall be stable as required by 5., at least 0.4 second before a weight signal is recorded.

5.2 The motion detector and automatic zero control circuits shall be interlocked so that use of the latter is inhibited during operation of the former.

PLATTER LOCK

6. A scale incorporating a platter locking system shall be designed and constructed such that the system does not interfere with the zero balance display, and it shall be inoperative until the load receiving element is stable as in 5.

ELECTRONIC INDICATORS

7. The contrast between any digital display and the background shall have a ratio equal to or greater than 4 to 1.

7.1 A scale shall incorporate a test system for verifying that all display segments are neither continuously on nor off; such test system shall permit verification of display segments without the need for any tools or by a self-verifying automatic system that indicates the occurrences of any failure.

FREE FLOATING WEIGHT SIGNAL

8. In order to allow for adjustment of commodities to a desired weight before the settled weight is used for computation, the weight signal used for computing the total price must be free floating until entry for computation.

WEIGHT UNITS

9. Associated with any digital weight registration there shall be suitably located an appropriate name, symbol or abbreviation for the unit of measurement registered.

CAPACITY INDICATION

10. No digital indicating element or recording element shall register any value when the load exceeds the rated capacity of the scale by more than 10 minimum increments of registration.

CUSTOMER INDICATION

11. Exempt as may otherwise be allowed by a Notice of Approval, any scale equipped with a digital registration for the operator shall have duplicate displays for the customer.

CONSTRUCTION AND DESIGN TO FACILITATE INSPECTION

12. Except as may otherwise be allowed by a Notice of Approval, means shall be provided to seal only the coarse zero and span adjustment controls so that all other components and adjustments are readily accessible without breaking the seal; such means shall be readily observable upon inspection without the necessity of disassembling any part requiring the use of mechanical means separate from the scale.

ZERO

13. When a scale displays a weight value less than zero, the total price indicator shall not display any value and recording elements shall be interlocked to inhibit the recording of negative weight values.

13.1 The maximum zero range of the type which may be adjusted from the scale exterior shall not exceed 4 per cent of rated scale capacity; unless operable only by a detachable tool, when activated, such adjustment mechanism shall only return the scale to a zero balance condition.

13.2 Automatic means to maintain a digital zero balance condition shall be non-operator controlled and the maximum load that may be placed on the load receiving element, with the scale indicating zero and "rezero" without indicating a weight value, shall be a mass equal to 0.6 of a minimum increment of registration.

13.3 The maximum zero range of an automatic means of maintaining zero shall not exceed 4 per cent of rated scale capacity.

TARE

14. The tare mechanism shall operate only in the direction of under-registration with respect to the zero load balance condition of the scale, and a negative weight indication shall continue to be displayed when the load receiving element is empty.

14.1 When the tare mechanism is functioning there shall be visual confirmation on or adjacent to the weight display that the tare mode is operating.

14.2 A scale may be equipped with full scale tare; however, the gross weight shall not exceed the rated capacity of the scale within the limits given in paragraph 10.

14.3 A tare mechanism shall be self-cancelling, that is, when any net weight is added to the tare, the total is computed and the gross amount if removed from the scale, the weight indication shall return to a zero balance condition in accordance with regulation 183, unless the scale is in the pre-packing mode.

14.4 An automatic tare control shall be identified with the word "TARE", the letters "TR", or words or letters that convey the same meaning.

14.5 Except as may otherwise be allowed by a Notice of Approval, a tare entry shall only be erased from the scale memory with the removal of gross load from the weighing element; entry of another price per unit of weight, use of a "clear" mechanism or any other keying sequence shall not affect the tare entry.

14.6 A scale incorporating a tare mechanism shall incorporate a power failure interlock providing a means whereby temporary loss of power to the scale will prevent a further scale operation without requiring a very obvious reset operation; when there is a loss of power to a scale all means of indicating that the scale is in the tare mode shall extinguish and remain extinguished when power returns.

14.7 Except as may otherwise be allowed by a Notice of Approval, the minimum increment of tare shall be the same as the minimum increment of registration.

14.8 The use of any mechanism to convert units of measurement (for example, lb/kg switch) shall be inhibited when tare is entered in a scale, unless this mechanism converts all values of weight registration when activated.

PRICE PER UNIT OF WEIGHT INDICATOR

15. Any scale other than one for pre-packing use shall clear all digital indication of total price and price per unit of weight, and shall extinguish the tare indication when either the commodity is removed from the weighing element or before another commodity is weighed and its price computed.

PRE-PACKING MODE

16. When a scale is in the pre-packing mode there shall be a visual confirmation of this on both the operator and customer sides of the scale, whether by the legend "FOR PRE-PACKING USE" or words that convey the same meaning.

LEVEL INDICATING MEANS

17. A scale shall be equipped with a level indicating means which shall be readily observable without the necessity of disassembling any scale part requiring the use of mechanical means separate from the scale.

REGISTRATION OF MONETARY VALUE

18. Any registration of monetary value shall be in mathematical agreement with the quantity indication and unit price, and shall be "rounded off" to the nearest minimum unit as follows:

(*a*) when the figure next beyond the last figure or place to be retained is less than 5 the figure in the last place retained shall be kept unchanged;

(*b*) when the figure next beyond the last figure or place to be retained is 5 followed by any figure other than zero or is greater than 5, the figure in the last place retained shall be increased by one.

WITHSTANDING VARIATIONS

19. Except as may otherwise be allowed by a Notice of Approval, the scale shall meet or exceed the performance criteria of the *Weights and Measures Regulations*, when tested after being calibrated and zeroed, under any possible combinations of the following operating conditions:

ambient temperature - 10°C to 40°C
relative humidity 10% to 95%

19.1 The weighing element shall withstand vertical forces to 150% of the rated capacity without affecting calibrations, and to 300% of rated capacity without permanent degradation.

19.2 A scale shall be capable of operating within $\pm$ 10% of its voltage rating and $\pm$ 2% frequency variation of its frequency rating.

LOAD INDICATION

20. For the same load kept on a scale, the difference between the indication obtained at the moment of placing the load and the indication obtained eight hours later shall not exceed the permissible acceptance limit of error for loads applied set out in Division 6 of the *Weights and Measures Regulations*.

20.1 The variation on returning to zero after the removal of a load which has remained on the scale for half an hour may not exceed one-half the finest digital increment of registration.

20.2 The no load indication shall not vary by more than one minimum increment of registration for a difference in ambient temperature of 5°C.

MISCELLANEOUS

21. A scale shall meet or exceed the performance criteria prescribed by the *Weights and Measures Regulations* and by these specifications when tested at a constant ambient temperature, that is, a temperature that does not vary more than 5°C.

21.1 A scale shall meet or exceed the performance criteria of the *Weights and Measures Regulations* when scanned at a distance of 2 metres with

(*a*) a 460 MHz (commercial) 4 watt, hand-held communicator, and

(*b*) a 27 MHz (citizen's band) 4 watt, hand-held communicator.

Specifications relating to the design, composition, construction and performance of electronic point of sale check-out weighing systems

SHORT TITLE

1. These specifications may be cited as the *Weights and Measures Specifications SGM-2*.

These Specifications were revoked on February 4, 1998. (SI/98-27)

Weights and Measures Ministerial Specifications

SGM-3

Relating to the Design, Composition, Construction and Performance of Electronic Automatic Weighing Devices (SI/98-27)

SHORT TITLE

1. These specifications may be cited as the *Weights and Measures Specifications SGM-3*.

AUTHORITY

2. These specifications are established pursuant to section 13 of the *Weights and Measures Regulations*, C.R.C., c. 1605. (SI/98-27)

INTERPRETATION

2.1 In these Specifications, "scale" means any automatic weighing machine to which these Specifications apply. (SI/98-27)

APPLICATION

3. Except as may be otherwise allowed by a Notice of Approval, these Specifications apply to any electronic digital indicating scale capable of use in trade with electronic components, other than a conveyor scale or one to which Weights and Measures Specifications SGM-1 apply. (SI/98-27)

MOTION DETECTOR

4. Except as may otherwise be allowed by a Notice of Approval, a scale shall incorporate a non-operator controlled motion detector to prevent the recording of a weight signal until the load receiving element is stable within

(*a*) plus or minus one minimum increment of registration, if it has a capacity of 2000 kilograms or less, or

(*b*) plus or minus three minimum increments of registration, if it has a capacity of more than 2000 kilograms.

4.1 The values recorded shall be within the applicable limits of error prescribed by the *Weights and Measures Regulations*.

4.2 The load receiving element shall be stable, as required by 4, at least 0.4 second before a weight signal is recorded.

4.3 The motion detector and automatic zero control circuits shall be interlocked so that use of the latter is inhibited during operation of the former.

ELECTRONIC INDICATORS

5. The contrast between any digital display and the background shall have a ratio equal to or greater than 4 to 1.

5.1 A scale shall incorporate a test system for verifying that all display segments are neither continuously on nor off; such test system shall permit verification of display segments without the need for any tools or by a self-verifying automatic system that indicates the occurrence of any failure.

WEIGHT UNITS

6. Associated with any digital weight registration there shall be suitably located an appropriate name, symbol or abbreviation for the unit of measurement registered.

CAPACITY INDICATION

7. No digital indicating element or recording element shall display or print any value when the load exceeds 105 per cent of the rated capacity of the scale.

ZERO

8. The maximum zero range of the type which may be adjusted from the scale exterior shall not exceed four per cent of rated scale capacity; unless operable only a detachable tool, when activated, such adjustment mechanism shall only return the scale to a zero balance condition.

8.1 Automatic means to maintain a digital zero balance condition shall be non-operator controlled, and the maximum load that may be placed on the load receiving element, with the scale indicating zero and "rezero" without indicating a weight value, shall be a mass equal to 0.6 of a minimum increment of registration.

8.2 The maximum zero range of an automatic means of maintaining zero shall not exceed 4 per cent of rated scale capacity.

TARE

9. The tare mechanism shall operate only in the direction of under-registration with respect to the zero load balance condition of the scale.

9.1 A scale may be equipped with full scale tare; however, the gross weight shall not exceed the rated capacity within limits given in paragraph 7.

9.2 An automatic tare mechanism control shall be identified within the word "TARE", the letters "TR", or words or letters that convey the same meaning.

9.3 Except as many otherwise be allowed by Notice of Approval the minimum increment of tare shall be the same as the minimum increment of registration.

9.4 The use of any mechanism to convert units of measurement (for example, lb/kg switch) shall be inhibited when tare is entered in a scale unless this mechanism converts all values of weight registration when activated.

9.5 When a device is capable of registering gross, net or tare weight, all such displays shall be appropriately marked.

9.6 When a device is equipped to display only one weight value at a time, there shall be visual confirmation on or adjacent to the weight display that the tare mode is operating.

CONSTRUCTION AND DESIGN TO FACILITATE INSPECTION

10. Except as may otherwise be allowed by a Notice of Approval, means shall be provided to seal only the coarse zero and span adjustment controls so that all other components and adjustments are readily accessible without breaking the seal; such means shall be readily observable upon inspection without the necessity of disassembling any part requiring the use of mechanical means separate from the scale.

WITHSTANDING VARIATIONS

11. A scale shall withstand vertical forces to 150 per cent of rated capacity without affecting calibrations, and to 300 per cent of rated capacity without permanent degradation.

11.1 Except as may otherwise be allowed by a Notice of Approval, a scale shall meet or exceed the performance criteria of the *Weights and Measures Regulations*, when tested after being calibrated and zeroed under any possible combinations of the following operating conditions:

ambient temperature	-10°C to +40°C
relative humidity	10% to 95%

11.2 A scale shall be capable of operating within ± 10% of rated voltage and ± 2% frequency variation of nominal frequency rating.

LOAD INDICATION

12. For the same load kept on a scale, the difference between the indication obtained at the moment of placing the load and the indication obtained eight hours later shall not exceed the permissible acceptance limit of error for loads applied set out in Division 6 of the *Weights and Measures Regulations*.

12.1 The variation on returning to zero after the removal of a load which has remained on the scale for half an hour may not exceed one-half the finest digital increment of registration.

12.2 The no load indication shall not vary any more than one minimum increment of registration for a difference in ambient temperature of 5°C.

JUNCTION BOXES

13. Junction boxes shall have a provision for sealing when they contain calibration adjustments.

MULTIPLEXED SCALES

14. When a single electronic indicator is coupled to two or more load-receiving elements with independent weighing systems:

(*a*) the indicator shall be equipped with separate calibrating circuits for each load-receiving element, so that the adjustment of one circuit shall not affect the calibration of any other;

(*b*) each calibrating circuit shall be appropriately marked to identify which load-receiving element it controls and that indication shall be clearly visible to both the operator and customer standing in their normal positions;

(*c*) the indicator shall be provided with means to prohibit the activation of any load-receiving element not in use and with automatic means to indicate clearly and definitely which load-receiving element or elements is in use; and

(*d*) any interconnecting cable which affects or can affect calibration shall be suitably identified to indicate with which load-receiving element it is associated.

MISCELLANEOUS

15. A scale shall meet or exceed the performance criteria prescribed by the *Weights and Measures Regulations* and by these specifications when tested at a constant ambient temperature, that is, a temperature that does not vary more than 5°C.

15.1 A scale shall meet or exceed the performance criteria of the *Weights and Measures Regulations* when scanned at a distance of 2 metres with

(*a*) a 460 MHz (commercial) 4 watt, hand-held communicator, and

(*b*) a 27MHz (citizen's band) 4 watt, hand-held communicator.

15.2 The value of the minimum increment of registration shall be equal to the number of kilograms or pounds expressed by one of the following formulae:

1×10^n, 2×10^n or 5×10^n,

where n represents a whole number, positive, negative or equal to zero.

15.3 Subject to subsection 172(2) to the *Weights and Measures Regulations* and except as may be specified in the Notice of Approval for special cases or for special conditions of use, the maximum value of the finest digital increment that is permissible for electronic scales is as set out in the following tables:

Capacity of Scale	Maximum Value of Finest Digital Increment
Kilogram(s)	Kilogram(s)
over 100,000	20
over 20,000 to 100,000	10
over 10,000 to 20,000	5
over 5,000 to 10,000	2
over 2,000 to 5,000	1
over 1,000 to 2,000	0.5
over 500 to 1,000	0.2
over 200 to 500	0.1
over 100 to 200	0.05
over 50 to 100	0.02
over 20 to 50	0.01
20 and under	0.005

Capacity of Scale	Maximum Value of Finest Digital Increment
Pound(s)	Pound(s)
over 200,000	50
over 40,000 to 200,000	20
over 20,000 to 40,000	10
over 10,000 to 20,000	5
over 5,000 to 10,000	2
over 2,000 to 5,000	1
over 1,000 to 2,000	0.5
over 500 to 1,000	0.2
over 200 to 500	0.1
over 100 to 200	0.05
over 50 to 100	0.02
50 and under	0.01

15.4 The finest digital increment of a scale that is converted from the Canadian system of units to the International system of units shall not be greater than but can be finer than the converted value set out in the following table:

Present Value (Finest Digital Increment)	Converted Value (Finest Digital Increment)
lbs or oz	kg
50 lbs	20
20 lbs	10
10 lbs	5
5 lbs	2
2 lbs	1
1 lb	0.5
0.5 lb or 8 oz	0.2
0.2 lb or 4 oz	0.1
0.1 lb or 2 oz	0.05
0.05 lb or 1 oz	0.02
0.02 lb or 1/4 oz	0.01
0.01 lb or 1/8 oz	0.005

15.5 When a scale has analogue and digital means of indication these shall be interlocked so that the use of the latter is inhibited during operation of the former.

Specifications relating to the installation and use of vehicle scales for stationary weighing.

SHORT TITLE

1. These Specifications may be cited as the *Vehicle Scale Specifications*.

These Specifications were revoked on February 4, 1998. (SI/98-27)

Railway Track Scales for In-Motion Weighing Specifications

SI/91-21

Registration 27 February, 1991

WEIGHTS AND MEASURES ACT

Railway Track Scales for In-Motion Weighing Specifications

The Minister of Consumer and Corporate Affairs, pursuant to paragraph 10(1)(*i*) of the Weights and Measures Act and sections 13* and 27* of the Weights and Measures Regulations, C.R.C., c. 1605, hereby establishes the annexed Specifications relating to the design, composition, construction and performance of electronic railway track scales for in-motion weighing and relating to the installation and use thereof.

January 28, 1991

PIERRE BLAIS
Minister of Consumer and Corporate Affairs

* SOR/78-792, 1978 *Canada Gazette* Part II, p. 3894

SPECIFICATIONS RELATING TO THE DESIGN, COMPOSITION, CONSTRUCTION AND PERFORMANCE OF ELECTRONIC RAILWAY TRACK SCALES FOR IN-MOTION WEIGHING AND RELATING TO THE INSTALLATION AND USE THEREOF

SHORT TITLE

1. These Specifications may be cited as the *Railway Track Scales for In-Motion Weighing Specifications*.

INTERPRETATION

2. (1) In these Specifications,

"Act" means the *Weights and Measures Act*; (*Loi*)

"actual tare" means the actual weight of an empty railway car determined by in-motion weighing; (*tare réelle*)

"double weighing" means the weighing of a railway car in two phases on the same track scale the results of which are automatically added together to register the whole weight of the railway car; (*pesage en deux temps*)

"dynamic adjustment" means an adjustment to electronic circuits of a track scale that is made to

compensate for the effects of dynamic forces that affect the in-motion weighing of a railway car; (*réglage dynamique*)

"in-motion weighing" or "weighing" means the weighing of railway cars while they are moving over the load-receiving element of a track scale; (*pesage en mouvement* or *pesage*)

"registration" means a displayed or printed value; (*indication*)

"rollback" means a reversal in direction of a railway car during the weighing process; (*inversion de marche*)

"single weighing" means the weighing of a railway car while it is entirely supported by a track scale; (*pesage en un temps*)

"stencilled tare" means the empty weight of a railway car as marked on the railway car; (*tare inscrite au pochoir*)

"track scale" means an electronic weighing machine intended for use in trade for in-motion weighing of railway cars; (*pont-bascule*)

"wheel detector" means a detection apparatus in the vicinity of a track scale, whether mounted or not on the track and including a photoelectric cell, that reacts to the motion of a railway car in order to control and monitor the sequence in the weighing process. (*détecteur de roues*)

(2) All other words and expressions used in these Specifications have the same meaning as in Part V of the *Weights and Measures Regulations*.

APPLICATION

3. These Specifications apply to every electronic track scale intended for use in trade for the in-motion weighing of railway cars.

DESIGN, COMPOSITION AND CONSTRUCTION

Wheel Detectors

4. (1) A track scale shall be provided with wheel detectors that

(*a*) initiate any logic sequence required to determine train velocity and axle configuration of railway cars and any other monitoring required for in-motion weighing; and

(*b*) permit the detection of any false logic or other malfunction that interferes with the proper operation of the track scale.

(2) Where any false logic or other malfunction is detected, the track scale shall become inoperable.

Operating Modes

5. A track scale shall be designed to have a static operating mode and a dynamic operating mode and to indicate the operating mode selected.

6. A track scale shall be designed so that dynamic adjustment of a weight does not affect any adjustment in the static operating mode.

7. A track scale shall be designed so that the means provided to make coarse zero and span adjustments in the static and dynamic modes are sealable.

8. The means that is provided for dynamic adjustment in a track scale shall have a maximum range not exceeding 0.25 per cent of the capacity of the track scale.

9. A track scale shall be designed so that while operating in the static mode it provides weight registrations with a minimum increment of 10 kg or less.

10. Where a track scale is being used in a manner other than in the manner authorized by the approval issued pursuant to section 3 of the Act or by the certificate issued pursuant to section 19 of the Act, the registration of the track scale shall be accompanied by a statement indicating that the registration shall not be used in trade.

Printer

11. Where a track scale incorporates a printer,

(*a*) means shall be provided to prevent a keyboard entry from altering data that has been entered or is being entered in respect of the in-motion weighing of a railway car;

(*b*) every keyboard entry of weight data shall be accompanied by a statement indicating that it is a keyboard entry;

(*c*) the printer shall indicate the operating mode of the track scale when used for any purpose other than in-motion weighing;

(*d*) the printer shall provide a printed record that

(i) includes the date and time of entry,

(ii) the identification number and weight of each railway car, and

(iii) subject to subsection 12(1), the total gross weight of the railway cars where summation of net weights is required;

(*e*) means shall be provided to prevent printing of the weight of the locomotive;

(*f*) means shall be provided so that on completion of the in-motion weighing of a railway car and the printing of the weight of the railway car, all stored weight data in respect of that railway car is automatically cleared; and

(*g*) the weight corresponding to the tare of a railway car shall be accompanied by the words "actual tare" or "tare réelle", or the words "stencilled tare" or "tare inscrite au pochoir", as the case may be, where that weight is printed on a record.

Track Scales for Unit Trains

12. (1) A track scale intended to be used solely for the in-motion weighing of unit trains shall not compute or register the net weight of individual railway cars.

(2) The gross weight of individual railway cars in a unit train may be printed for the purpose of determining overload if each printed weight is accompanied by the letters "UT" or "TB".

Velocity Restriction

13. A track scale shall be designed to prevent registration of the weight of a railway car while the car is moving at a velocity greater than the maximum operating velocity for which the track scale is approved pursuant to section 3 of the Act.

14. A track scale shall be designed so that, where the velocity of the railway car exceeds the maximum limit specified in the notice of approval issued in respect of the track scale pursuant to section 3 of the Act, the track scale

(*a*) prevents the weight of the railway car from being printed or stored in the track scale memory; and

(*b*) locates and identifies the railway car and gives an audible or other signal to alert the operator.

Weighbridges

15. The rails of the weighbridge in a track scale shall be fastened securely to prevent any unusual movement of the rails on the application of a load.

16. Each end support of a weighbridge shall be positioned so as to prevent any lifting of the weighbridge on the application of a load to any part of the weighbridge.

17. Movement of the weighbridge shall be constrained both longitudinally and transversely to the extent necessary to ensure proper operation of the track scale.

Warm-up Delay

18. A track scale shall be designed so that after the application of power, the registering of weight data is delayed until the manufacturer's recommended warm-up time has elapsed.

Prevention of Registration

19. A track scale designed so that weighing requires that the operator activate particular controls or automatic sequencing shall be provided with means to prevent the track scale registering any weight until the activation of the controls or automatic sequencing is completed.

Rollback

20. A track scale shall stop registering weights when a rollback of railway cars occurs unless the track scale is designed for in-motion weighing of railway cars while rollback occurs.

Automatic Track Scale

21. An automatic track scale shall be provided with means to prevent the registering of weight until the scale has been reset to zero at the beginning of a weighing sequence.

INSTALLATION AND USE

Approach and Departure Rails

22. The foundations and anchoring of the approach and departure rails shall be of sufficient strength and rigidity to ensure that

(*a*) the approach and departure rails remain parallel and in alignment horizontally and vertically with the rails of the weighbridge; and

(*b*) thermal expansion and contraction does not adversely affect the proper operation of the track scale.

23. (1) For double weighing of coupled railway cars, the approach and departure rails shall be straight, uninterrupted and without joints for a distance of not less than 30 m.

(2) For double weighing of uncoupled railway cars, the approach and departure rails shall be straight, uninterrupted and without joints for a distance of not less than 25 m.

(3) For single weighing of railway cars, the approach rails shall be straight for a distance of not less than 25 m.

24. Every gap between the weighbridge rails and the approach and departure rails shall be minimized by means of transverse bevelling and overlapping of the rails or by any other similar means that reduces the impact at the gap.

Tare

25. The stencilled tare of a railway car shall be used only for the purpose of determining transportation charges for goods and only if the following conditions are met:

(*a*) the stencilled tare weight shall be marked in 50 kg increments or less and shall be accompanied by the date on which the stencilled tare weight was determined; and

(*b*) the difference between the actual tare and the stencilled tare shall not exceed

(i) 150 kg, for a railway car of 25 000 kg or less,

(ii) 200 kg for a railway car of more than 25 000 kg but not more than 30 000 kg, and

(iii) 250 kg for a railway car of more than 30 000 kg.

26. Where actual tare is used and stored in the track scale memory following in-motion weighing of an empty railway car, the actual tare shall be accompanied by a railway car identification code.

27. (1) For weight assessment of commodities, other than to determine transportation charges, a train shall be weighed loaded and unloaded, and the difference between the two weights shall represent the net weight of the quantity of commodities in the unit train or each individual railway car, as applicable.

(2) The weights referred to in subsection (1) shall be erased from the track scale memory immediately after the printing of the net weight of the quantity of commodities.

28. If the net weight of individual railway cars is determined, the gross weight, the tare and the net weight of each individual railway car shall be registered with the indication "gross weight" or "poids brut", "tare", or "net weight" or "poids net", as appropriate, and where the information is stored in the track scale memory it shall be automatically cleared immediately after printing.

Safeguards

29. Where the registration of the weight of a railway car is prevented for any reason, the railway car shall be re-weighed if the weight is being used in trade.

30. All interconnecting wiring between the load cells, the junction boxes and the instrumentation that forms part of a track scale shall be shielded and grounded and enclosed in conduits.

31. Load cell cables shall be separated from power cables and shall not be run in the same conduit.

32. Shims or other height or level adjustment features of a permanent track scale shall be clean, smooth and made of steel or any other material of equivalent strength and, if not grouted, shall cover sufficient area under level stands or load cell bases to ensure maintenance of a stable and level condition under normal conditions of use.

33. The operating velocity limits specified in the notice of approval issued in respect of a track scale pursuant to section 3 of the Act shall be prominently displayed near the means of registration of the track scale.