



**Summary of Substantive Changes
between the 2007 and 2012 editions of
CSA B481.0 “Material, design, and construction requirements
for grease interceptors” and
CSA B481.1 “Testing and rating of grease interceptors using lard”**

Presented to the IAPMO Standards Review Committee on November 4, 2013

General: There are products listed only to the standard CSA B481.1 of this series. There were no changes to CSA B481.1. However, CSA B481.0 is repeatedly referenced in CSA B481.1 and the changes to B481.0 might have an impact on currently listed products. The substantive changes to CSA B481.0 are:

- Removed the reagent test requirements for fiberglass-reinforced plastic and concrete coatings and linings (see Section 4.4.1)
- Added a “no-load” rating for interceptors that do not support any live load (see Section 6.1.1)
- Changed the test equipment, test method and rating requirements for the loading test for covers (see Section 6.1)
- Added a new hydrostatic pressure test (see Section 6.3)
- Added marking requirements for covers (see Section 7.3)

Section 4, Material requirements:

Section 4.3, Thermoplastics: Changed the referenced standard for compliance of thermoplastics used for piping and internal components from CSA B181.3 to CSA B181.0 as follows:

Thermoplastics used for the construction of the body of the grease interceptor and not including interior components, inlet, and outlet shall comply with the material requirements specified in CSA B181.3 and shall have a minimum wall thickness of 3.96 mm (0.156 in). Thermoplastics used to fabricate piping and internal components of the grease interceptor shall comply with the CSA B181.0.

Section 4.4, Fibreglass-reinforced plastic (FRP):

Section 4.4.1, General: Removed the reagent test requirement for Fiberglass reinforced plastic as follows:

FRP shall comply with the applicable material requirements of CSA B66 ~~and shall be tested for corrosion resistance by exposure to adverse conditions in accordance with ASTM C 581 for the following reagents:~~

Reagent	Concentration in water
Acetic acid	25% by volume
Hydrochloric acid	15% by volume
Sodium carbonate	10% by volume
Sodium chloride	Saturated
Sodium hydroxide	5% by volume
Sodium hypochloride	5.25% by volume
Sulphuric acid	0.1 N

Section 4.5.2, Concrete coatings and linings: Removed the reagent test requirement for concrete coatings and linings by removing the table of reagents in section 4.4.1 as follows:



Concrete coatings and linings shall be tested for corrosion resistance by exposure to adverse conditions in accordance with ASTM C581 for the reagents specified in Clause 4.4.1.

Section 5, Construction requirements:

Section 5.2, Mild steel: Removed the epoxy coating thickness range and specified a minimum thickness as follows:

Mild steel shall be protected internally and externally with ~~a~~ an epoxy or equivalent coating with a minimum thickness of 40 to 50 μm (1.5 to 2.0 mil) ~~thick epoxy or equivalent coating~~.

Section 5.3, Thermoplastics:

Section 5.3.1, General requirements: Removed the maximum elongation at break requirement and minimum resistance to UV radiation as follows:

Thermoplastics shall ~~have~~

~~(a) an elongation at break greater than 5%;~~

(a) have a tensile yield strength greater than 16 MPa (2320 psi), measured in accordance with ASTM D638; and

~~(b) (c) a minimum resistance to UV radiation of 4 GJ/m² (352 000 Btu/ft²)~~ be UV stabilized.

Section 6, Test methods and performance requirements:

Section 6.1, Loading test for covers:

Section 6.1.1, Load classification: Added a “no-load” rating as follows:

Grease interceptor covers and top rims shall be rated in accordance with the load classifications specified in Table 1. The load classifications are based on the different types of traffic to which the cover and top rim will be subjected under typical use conditions. A “no load” rating shall not require testing under Clause 6.1.

Table 1: Changed title and added platen diameters as follows:

~~Safe live load, kg (lb)~~ Load classification:

Load classification	Safe live load, kg (lb)	<u>Platen diameter,</u> <u>mm (in)</u>	Minimum test load at failure, kg (lb)
<u>No load rating (NR)</u>	<u>0</u>	<u>N/A</u>	<u>0</u>
Light duty (L): foot traffic	135 (300)	<u>90 (3.5)</u>	270 (600)
Medium duty (M): light vehicular traffic (e.g. cars)	900 (2000)	<u>150 (5.9)</u>	1800 (4000)
Heavy duty (H): light trucks	2250 (5000)	<u>150 (5.9)</u>	4500 (10 000)
Extra heavy duty (X): heavy trucks	3375 (7500)	<u>250 (9.8)</u>	6750 (15 000)
Special duty (S)	4500 (10 000)	<u>250 (9.8)</u>	9000 (20 000)

Note: For example, to be classified heavy duty, a cover must fail above 4500 kg (10 000 lb) so that its safe live load is above 2250 kg (5000 lb).



Section 6.1.2, Test equipment: Changed the platen diameter from a single diameter of 90 mm (3.5 in) to variable diameters for different loads as follows:

~~The platen for applying the test load shall be 90 mm (3.5 in) in diameter.~~ The diameter of the platen applying the test load shall be as specified in Table 1. The same platen shall be used throughout the test. For example, if a failure is expected at 48 000 kg (10 600 lb) then a 250 mm (9.8 in) platen shall be used from the beginning of the load application.

Section 6.1.3, Test method: Specified test temperature and the load application rate and changed the time period of the load application from hold for 10 min to continuous increase until failure as follows: The loading test for grease interceptor covers shall be conducted at room temperature (20 °C ± 5°) (68.5°F ± 9°) for covers intended to be used only indoors, or at the minimum and maximum ambient air temperatures (as specified by the manufacturer) for covers intended to be used outdoors. The procedure shall be as follows:

- (a) Install the cover and top rim in the same way as it would be placed in its intended application.
- (b) ~~Gradually apply a load, with the platen specified in Clause 6.1.2, at the centre of the cover until the load reaches twice the maximum safe live load specified in Table 1 for the applicable load classification.~~
- (c) ~~Hold the test load for 10 min.~~
- (d) ~~Calculate the load at failure in accordance with Clause 6.1.4.~~ Place the platen specified in Clause 6.1.2, at the centre of the cover and gradually apply load to the platen at a rate of 6.0 mm +/- 1.0 (0.25 inch/min +/- 0.045) until point of failure is reached as specified in Clause 6.1.4.

Note: Only one cover may be tested or an average of three covers of the same construction, to determine the cover classification.

Section 6.1.4, Load at failure: Decreased the allowable failure deflection from 10% to 5% as follows: The load at failure shall be the lowest of the following:

- (a) for brittle materials, the load at which the first fracture on any part of the cover or rim appears;
- (b) for ductile materials, the load at which the maximum deflection of the cover exceeds ~~10%~~ 5% of its largest transverse dimension (while loaded); or
- (c) the load at which the permanent set (at the point of loading, after the load is removed) exceeds 2% of the largest transverse dimension of the cover.

Section 6.1.6, Cover load rating: Specified the method to use for cover load rating as follows:

The cover/rim load rating shall be classified by matching the safe live load of the cover/rim as determined in Clause 6.1.5 with the load classification safe live load listed in Table 1. The rating shall be the load classification with the safe live load that is equal to or smaller than the cover/rim safe live load. For example, if a cover/rim fails at 3000 kg (6600 lb), then its maximum safe live load is 1500 kg (3300 lb) and it will be rated medium duty since the next smaller safe live load listed in Table 1 is 900 kg (2000 lb) for the medium duty load classification.

Section 6.3, Hydrostatic pressure test: Added the following hydrostatic pressure test:

The outlet of the grease interceptor shall be plugged and a vertical standpipe comprised of clear 2 in pipe shall be installed at the inlet. The interceptor shall be filled with water at room temperature to just below the cover seal of the device. The grease interceptor cover shall be installed as recommended by the manufacturer. The interceptor shall then be filled with water through the inlet until the water reaches 36 mm (1.4 in) above the cover seal. The water shall be allowed to stabilize for 5 minutes and the interceptor refilled to 36 mm (1.4 in) if necessary. The water level shall be observed for 15 minutes. Any decrease in water level greater than 13 mm (0.5 in) shall constitute a failure.



Section 7, Markings: Added marking requirements for covers as follows:

7.3 Cover marking

The cover shall be marked permanently with the following:

(a) the load classification in accordance with Clause 6.1.1 (L, M, H, X, or S)

(b) for covers with no classification, a note: "Do not step on cover"/"Ne pas marcher sur le couvercle"

(c) if for outdoor use, the minimum and maximum temperatures tested in °C with (°F) if required.