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<table>
<thead>
<tr>
<th>2</th>
<th>General Requirements</th>
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<th>Labeling, Installation, and Maint.</th>
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<td>Flow Controls and/or Vents</td>
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3 Testing

3.1 Construction of Test Equipment

3.2 Installation of Testing Equipment

3.3 Preliminary Test Procedure

3.4 Skimming Procedure

3.5 Rating Test Procedure

Test Results: All test and evaluations were conducted per the written procedures in the specific standards.

**CSA B481.1-12**

5 Test Method (Testing is covered under ASME A112.14.3 below)

Test Results: All test and evaluations were conducted per the written procedures in the specific standards.


2 General Requirements:

2.1 Design: **COMPLIES**

The grease interceptor complies with all the applicable requirements of ASME B1.20.1 and ASTM A888.

2.2 Rating: **COMPLIES**

The unit tested was a “Type C” - Units without an external flow control, directly connected.

The manufacturer’s installation instruction's identifies installation parameters consistent with the test parameters.

2.3 Inlet and Outlet Connections: **COMPLIES**

Inlet and Outlet connections - Hubless coupling is compliant with ASTM A888

2.4 Flow Controls and/or Vents: **COMPLIES**

2.4.1 Vents or air intakes were used. There was no flow control

2.4.2 When a flow control and/or vent is used during testing for rating a grease interceptor, the rating of the unit did not exceed the maximum flow through the flow control.

The manufacturer’s literature reflected that the rating was achieved with the vent attached, and that the vent was installed with the unit.
3 Testing

3.1 Construction of Test Equipment:

3.1.1 Test Sink: **COMPLIES**
- Length: 8 ft. (8 ft)
- Width: 2 ft. (2 ft)
- Depth: 12.5" (12.5 inches)
- Corrosion Resistant Material: *stainless steel* (yes)
- Number of compartments: 2 (2)
- Compartment length: 4 ft (4 ft)
- Structurally reinforced: yes (yes)
- Supported on legs: yes (yes)
- Rim height with legs: 3' (3 ft)
- Legs structurally supported: yes (yes)

3.1.1.1 Sink Waste Connections: **COMPLIES**
Each sink compartment was fitted with a 1-½" standard sink waste connection with flange, crossbars, slip joint tailpiece, and locknut.

The waste connections were located on opposite sides of the center partition in the corner formed by the side of the sink and the center partition.

3.1.1.2 Water Level Gauges: **COMPLIES**
Each compartment was equipped with a gauge connection and a water level gauge with gauge glass.

Each gauge connection was fitted into the bottom of a sink compartment and in close proximity to the waste outlet.

Each gauge was mounted on the outside of the sink, adjacent to its respective gauge connection, and extended diagonally upward from the bottom center to the top outside corners.

The gauges were calibrated to read directly the number of inches of water in the sink compartments above the sink waste flange.

3.1.1.3 Movable Sink Partitions: **COMPLIES**
Each compartment of the sink was fitted with a movable partition, making it possible to regulate the size of the compartment to any desired capacity.
3.1.2 Skimming Tank: **COMPLIES**
The skimming tank was rectangular in shape; open at the top and equipped with a stationary baffle located approximately 3 feet from the end of the tank receiving the discharge from the interceptor.

The baffle extended the width of the tank and to within 4 inches of the bottom of the tank.

Tank Length - 8'
Tank Width - 28''
Tank Depth - 32''

Tank was made of corrosion resistant material - yes (yes)
Tank was structurally reinforced - yes (yes)

Waste outlet diameter - 4'' (4 inches)
The waste outlet was connected to the bottom of the tank at one end and trapped to retain approximately 26 inches of water in the tank.

The tank provided a 4 inch bottom drain valve to permit draining and cleaning.

3.2 Installation of Testing Equipment:

3.2.1 Direct Connection Test Types A, B, and C:
Findings- The “GB-1 (20 gpm)” was a Type C unit.

3.2.1.1 Waste Piping: **COMPLIES**
The combined horizontal waste, vertical waste riser, interceptor inlet, and discharge piping shall; be 2 inches for test flows of 50 gpm or less and 3 inches for test flows over 50 gpm.
Findings - Test flow was 20 gpm. Pipe size was 2 inches.

3.2.1.2 Sink and Interceptor Locations: **COMPLIES**
The sink was located with the sink rim 13 feet above the outside bottom of the grease interceptor being tested.

3.2.1.3 Skimming Tank Location: **COMPLIES**
The skimming tank was located low enough, with respect to the interceptor, for the discharge piping from the interceptor to clear the tank rim by not less than 3 inches.
3.2.1.4 Installation of Waste Piping: **COMPLIES**
(a) **Sink Connections**- The sink outlet waste connection from each sink compartment was 1-½ inches in size and each connection was fitted with a quick-opening gate valve.
(b) **Combined Horizontal Waste Piping**- The combined horizontal waste piping into which the sink outlets connect were installed with the center line 11 inches below the bottom of the sink and properly hung and braced from the sink reinforcement and supports.
   The waste pipe was fitted to the inlet of a flow control and vent.
(c) **Flow Control and/or Vent Device (Optional)**- The flow control and device was adequate in size for the interceptor to be tested and was equipped with the proper size orifice and/or other details to provide the proposed flow rate of the subject interceptor. The waste piping on either side of the flow control and vent was fitted with unions to permit removal of the device.
(d) **Vertical Waste Riser**- The vertical waste riser was connected to the outlet of the flow control and vent device and extended downward to connect to the grease interceptor inlet by means of an elbow and a short horizontal nipple.
(e) **Interceptor Discharge**- The discharge pipe from the interceptor outlet to the skimming tank had a minimum pitch of 1/8 inch per foot and was provided with a 2 inch vent properly located to prevent siphoning of the interceptor.
(f) **Interceptor Connections**- When inlet and outlet openings of the interceptor exceed 2 inches or 3 inches for test flows exceeding 50 gpm, reducing couplings were used to permit connections of the 2 inch or 3 inch.

3.2.2 Indirect Connection Test Type D: **NOT APPLICABLE**

3.3 Preliminary Test Procedure:

3.3.1 Media Analysis: **COMPLIES**
   pH of water - 6.4 (6.0 to 8.0)
   Specific Gravity of Lard - 0.875 at 150°F (0.875 ± 0.005 at 150°F)

3.3.2 Establishing Sink Compartment Capacity: **COMPLIES**
   Capacity of compartment 1 - 24 gallons (1.2 x flow rate of interceptor)
   Capacity of compartment 2 - 24 gallons (1.2 x flow rate of interceptor)

3.3.3 Establishing Vol. of Incremental Discharge: (based on 10" water above sink outlet): **COMPLIES**
   Compartiment 1 Discharge - 20 gallons (equal to flow rate of interceptor)
   Compartiment 2 Discharge - 20 gallons (equal to flow rate of interceptor)

3.3.4 Computation of Flow Rate: **FOLLOWED**
The flow rate from the sink was computed by timing the rate of drainage of the first 9 ½" of water from the sink compartment, measured from the 10" mark to the datum line ½" above the sink outlet flange.
3.3.4.1 Check Flow Rate Tests: **COMPLIES**

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For all of the above flow rates, the time for total discharge did not exceed 126 seconds.

3.3.4.2 Calibrated Drainage Flow Rates: **COMPLIES**

Proposed flow rate of Interceptor being tested = 20 gpm.

The average of the above calibrated flow rates for simultaneous discharge was equal and didn’t exceed by not more than 5% the proposed flow rate of the interceptor being tested.

Findings = 20.4 gpm average (21 gpm max.)

3.4 Skimming Procedure: **FOLLOWED**

The skimming procedure was initiated 5 minutes after the increment to be skimmed has discharged into the tank. The baffles were used alternately until the amounts of grease collected in the procedure are less than 1% by visual observation. Upon completion of the skimming procedure, water shall be drained from the bottom of the pail by means of a spigot. The remainder of the water was collected as describe in the procedure until only a few drops are observed. The lard is then weighed to the nearest ½ gram.
3.5 Rating Test Procedure:
See Table 1 of test report for Rating Testing.

3.5.1 Test Media: FOLLOWED
Certification tests were conducted with fresh, unused lard and water as defined and both within a temperature range from 150°F to 160°F.

3.5.2 Ratio of Lard to Water: FOLLOWED
The test lard was introduced into one compartment, during each incremental discharge, in the ratio of 1 lb. of lard for each 5 gallons of water in that compartment. Consequently, the proportion of lard to the total amount of water discharged from both sink compartments during each increment was 1 lb. for each 10 gallons respectively. The required amount of test lard, within the above temperature range, was weighed out and poured into the test compartment of the sink. Findings- 4 lbs per increment used.

3.5.3 Test Increments: FOLLOWED

3.5.3.1 Each test increment consisted of the simultaneous discharge of water from both sink compartments and the lard from the test compartment.

3.5.3.2 During the first test increment, the lard was poured into compartment 1 while compartment 2 discharged clear water. During the second test increment the lard was poured into compartment 2 while the water in compartment 1 remained clear.

3.5.4 Flow Rates: FOLLOWED
The drainage period for each increment was gauged and timed on the basis of the flow from the compartment containing the clear water. The flow rate from the sink was computed and recorded for each increment. (See Table 1 of test report).

3.5.5 Efficiency Determinations: FOLLOWED
The grease was removed from the skimming tank and the efficiency of the interceptor was computed at intervals of five increments or less until the average efficiency reached 93% or less and/or the incremental efficiency reached 85% or less (See Table 1 of test report).

3.5.6 Duration of the Test: FOLLOWED
The testing was continued until the average efficiency reached 85% or less and/or the incremental efficiency reached 75% or less.

3.5.7 Determination of Grease Retention Capacity: FOLLOWED
Maximum grease retention capacity was established at the increment preceding two successive increments in which either the average efficiency is less than 90% or the incremental efficiency is less than 80%.
3.5.8 Performance Requirements for Rating: COMPLIES
The interceptor did conform with or exceeded the following requirements at the breakdown point:
(a) Had an average efficiency of 90% or more.
   Findings – 97.3 %
(b) Had an incremental efficiency of 80% or more.
   Findings – 91.0 %
(c) Had retained not less than 2 lbs of grease for each 1 gpm average flow rate as determined during the testing.
   Findings – 70.04 lbs.

3.5.9 Rated Capacities: COMPLIES
Standard rating flow rate and grease retention capacities for grease interceptors were tested in accordance with the above test procedure and did conform with the requirement of ASME A112.14.3-2000.
Findings-  Flow Rate __20__ gpm
           Grease Retention Capacity Rating - __40__ lbs.

4 Labeling, Installation, and Maintenance

4.1 Labeling: COMPLIES
Products were labeled with the following information:
(a) Manufacturer's name - Schier Products (yes)
(b) Model number - ________________ yes (yes)
(c) Rated flow(s) - ________________ yes (yes)
(d) “Inlet” and “Outlet” - ________________ yes (yes)
(e) ASME A112.14.3 - ________________ yes (yes)
(f) Product type by rating - ________________ yes (yes)
(g) Efficiency at the rated capacity - ________________ yes (yes)

4.2 Installation Instructions: COMPLIES
The grease interceptor was provided with complete installation instructions, including but not limited to the following:
(a) Flow control and/or vent requirements - ________________ NA (yes)
(b) Separate trapping requirements - ________________ yes (yes)
(c) Elevation and accessibility requirements - ________________ yes (yes)
(d) Safety and health-related instructions - ________________ yes (yes)
(e) Cleanout locations - ________________ yes (yes)
(f) Instructions that show the clearances required for maintenance, cleaning, and hazard prevention - ________________ yes (yes)
(g) Cautions against installation in any manner except as tested and rated - yes (yes)
4.3 Maintenance Instructions: **COMPLIES**
Units were provided with complete maintenance instructions including but not limited to the following:
(a) Maintenance Instructions - yes (yes)
(b) Safety and health provisions - yes (yes)

Each grease interceptor was provided with service instructions which included a trouble-shooting guide as well as instructions for performing necessary servicing or for obtaining servicing.
TABLE 1 – Test Results per ASME A112.14.3-2000 (Reaffirmed 2004)

<table>
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<th>Test No.</th>
<th>Grease Sink</th>
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<th>Flow Rate (GPM)</th>
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<th>Lbs skimmed</th>
<th>Lbs retained</th>
<th>Efficiency (%)</th>
<th>Lbs added</th>
<th>Lbs skimmed</th>
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Performance Requirement Rating