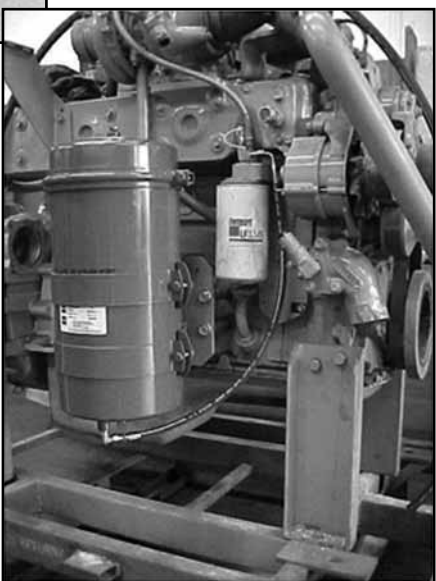


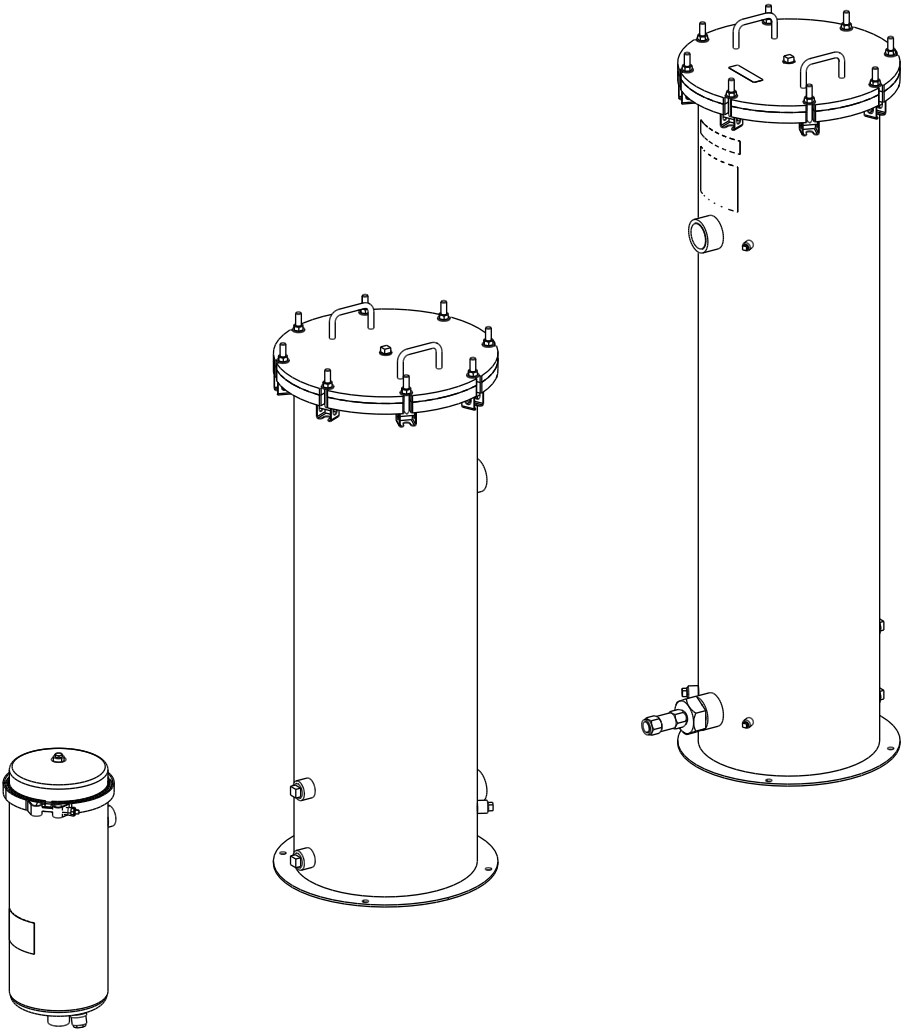
Fleetguard®



4 • Winslow® Depth Filters

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Winslow® Lube Oil Filters



Introduction

Winslow® Lube Oil Filtration Systems

Power generating stations, pipelines, and marine engines worldwide work hard, for long hours. Run times of 98+% are a standard in many industries. Winslow lube oil filters provide your engine with contaminant protection and an extended service life unmatched by other systems. No other filter media controls solids, water, lacquers, nitration, and oxidation like the Winslow depth filter.

Lube Oil Filter Types

- Full-flow – 100% of the engine lube oil is filtered.
- By-Pass – used in conjunction with the full-flow filter, a percentage of the oil is filtered through the by-pass filter.

Winslow Full-Flow Filters

The Winslow depth type full-flow lube oil filter has been installed and retrofitted on engines around the world to improve existing engine oil filtration. In most cases, engine oil change intervals doubled or tripled.

Winslow By-Pass Filters

Numerous tests have proven the benefits of adding a by-pass filter to an engine. Choosing the right by-pass filter can remove particulate contaminants that cannot effectively be controlled by standard engine oil filters.

Diesel Engines

- Reduces soot levels in oil
- Extends oil change intervals
- Provides better oil cleanliness levels
- Extends full-flow filter life

Natural Gas Engines

- Reduces oxidation and nitration
- Optional treated elements are available to combat acid formation in oil
- Helps maintain viscosity levels
- Extends full-flow filter life

Non-Standard Gas Engines

(Landfill, Digester, Biomass, etc.)

- Increases oil sump capacity
- Absorbs and Adsorbs semi-solid contamination
- Extends full-flow filter life

Selecting a Full-Flow Oil Filter

If you want to replace your existing engine full-flow filtration system, you must first determine the oil pump flow rate for your engine. Consult the engine dealer or manufacturer if you are uncertain. Select the proper housing part number by matching the flow rate with the specifications on the following page. If you are still uncertain, contact Cummins Filtration® Technical Assistance for help in choosing the proper filter. Depending on the type of existing full-flow filter(s) already in your engine, an adapter or alternate engine oil connection port(s) may be required to install the replacement Winslow® Full-Flow Oil Filter.

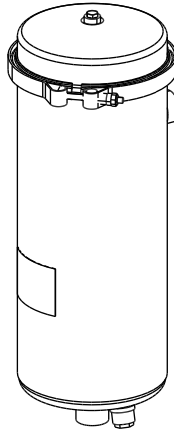
Selecting a By-Pass Oil Filter

If you want to add a Winslow By-Pass Oil Filter to your engine, use the chart below:

Engine Oil Capacity qt (L)	Filter Oil Volume qt (L)	Flow Rate** gal/min (L/min)	Filter Part Number
20 to 48 (18.9 to 45.4)	12 (11.4)	0.4 (1.5)	95240J
49 to 68 (46.3 to 64.4)	15 (14.2)	0.8 (3.0)	95252A
69 to 117 (65.3 to 110.7)	27 (25.6)	1.2 (4.5)	95303A
118 to 147 (111.7 to 139.1)	35 (33.1)	1.9 (7.2)	95353A
148 to 319 (140.1 to 301.9)	86 (81.4)	3.0 (11.4)	95633A
320 to 467 (302.8 to 442.0)	128 (121.1)	5.6 (21.2)	95733A
468 to 814 (442.9 - 770.3)	170 (160.9)	8.2 (31.0)	95833A

For application information, consult Cummins Filtration® Technical Assistance for details.

Full-Flow Filters For Natural Gas Engines, Diesel Engines, Compressors, and General Industrial Applications



Type 1

Specifications

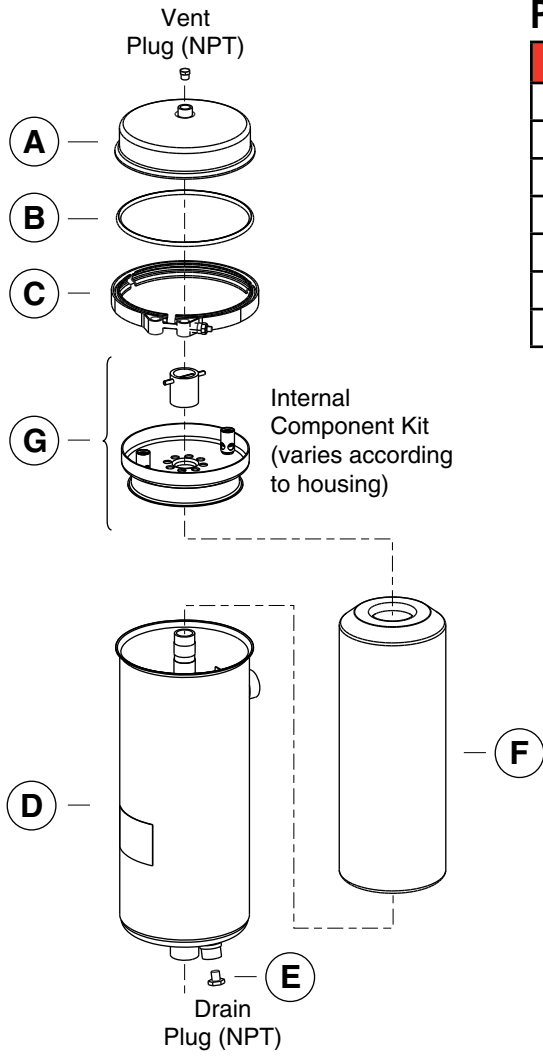
Housing Part Number	Filter Oil Volume qt (L)	Flow Rate* gal/min (L/min)	Element Number	Number of Elements	Efficiency (Particulate Control)	Capacity
95101A	4 (3.8)	4 (15.1)	82320A	1	$\beta_{15} = 2$	Capacity Exceeds SAE Time Constraints
95201A	6 (5.7)	6 (22.7)	82370D	1	$\beta_{15} = 2$	
95251A	15 (14.2)	10 (37.9)	82480U	1	$\beta_{15} = 2$	
95351A	35 (33.1)	20 (75.7)	82640A	1	$\beta_{15} = 2$	

* Flow rate based on 30 SAE oil at 180 °F (82.2 °C) at 55 lb/in² (3.8 bar).

Notes:

1. Designed for 75 lb/in² (5.2 bar) continuous operating conditions.
2. Initial assembly differential pressure should not exceed 3 PSID (20.7 kPa).
3. Change element after initial differential pressure increases 5-7 PSID (34.5 - 48.3 kPa), depending on engine age and operating oil pressures. A maintenance professional should make the appropriate application decision.
4. Terminal assembly differential pressure should not exceed 10 PSID (69.0 kPa).

Specifications subject to change without notice.



Parts List

Part	Description	Part Number
A	Cover Assembly	See Ordering Information
B	O-Ring	
C	Band Clamp	
D	Housing	
E	Drain Plug	
F	Filter Element	
G	Internal Component Kit	

Ordering Information

D Housing*	A Cover Assembly	B O-Ring	C Band Clamp	E Drain Plug	F Filter Element	G Internal Component Kit
95101A	Q80296A	Q58811	Q52629A	Q69171	82320A	990432K
95201A	Q57508A	Q58510	Q53086A	Q69172	82370D	990433K
95251A	Q57511A	Q58500	Q53085A	Q69171	82480U	990434K
95351A	Q57597A	99955A	Q52860A	Q69172	82640A	990435K

* Designed for 75 lb/in² (5.2 bar) continuous operating conditions.
Table corresponds to Parts List on previous page.

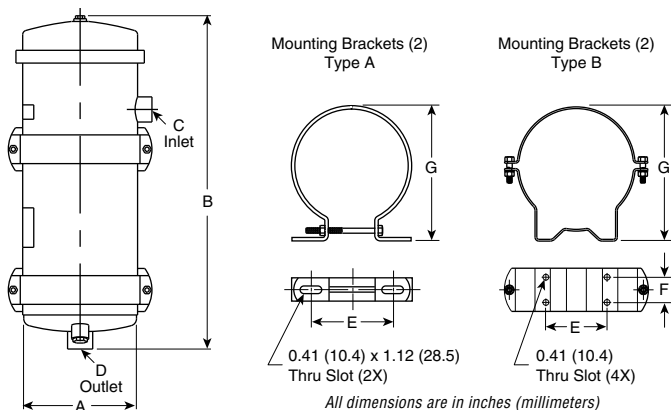
Replacement Filter Elements

Part Number	Description
82320A	$\beta_{15} = 2$ Full-Flow Lube Depth Element
82370D	$\beta_{15} = 2$ Full-Flow Lube Depth Element
82480U	$\beta_{15} = 2$ Full-Flow Lube Depth Element
82640A	$\beta_{15} = 2$ Full-Flow Lube Depth Element

Filter Specification

Composed of a high flow media and a dense cotton/wood blend media section. The high flow media (Controlled Pressure or CP section) permits highly viscous cold oil to flow through the element and filter during cold engine starts. Provides $\beta_{15} = 2$ solid contamination control.

Mounting/Dimensions

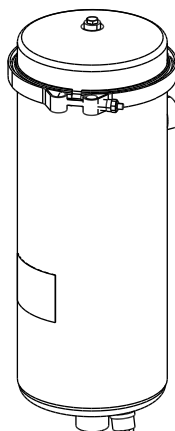


Housing* Part Number	A Diameter in (mm)	B Height in (mm)	C Inlet	D Outlet	E Mounting Bracket Hole Horiz. Spacing in (mm)	F Mounting Bracket Hole Vert. Spacing in (mm)	G Mounting Bracket Max. Width in (mm)	Bracket Type
95101A	5.0 (127.0)	14.0 (355.6)	3/4" NPT	3/4" NPT	5.75 (146.1)	–	5.97 (151.6)	A
95201A	6.0 (152.4)	20.5 (520.7)	1" NPT	1" NPT	4.38 (111.3)	–	7.04 (178.8)	A
95251A	8.0 (203.2)	23.0 (584.2)	1" NPT	1" NPT	4.25 (107.8)	1.75 (44.5)	9.42 (239.3)	B
95351A	8.6 (218.4)	40.0 (1016.0)	2" NPT	2" NPT	4.25 (107.8)	1.75 (44.5)	10.03 (254.8)	B

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.

By-Pass Filters

For Natural Gas Engines, Non-Standard Gas Engines, Diesel Engines, Compressors, and General Industrial Applications



Type 1

Specifications

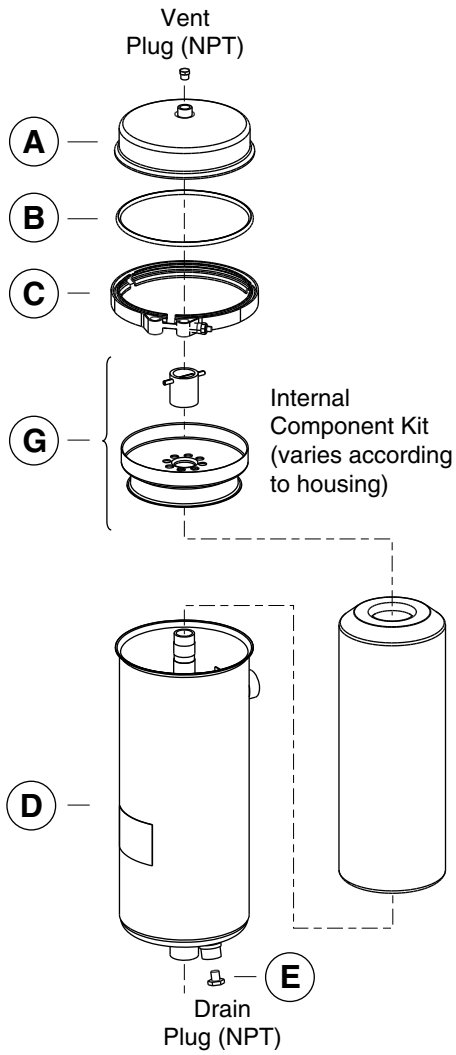
Housing Part Number	Filter Oil Volume qt (L)	Flow Rate* gal/min (L/min)	Element Number	Number of Elements	Efficiency (Particulate Control)	Capacity
95240J	12 (11.4)	0.4 (1.5)	82421A	1	$\beta_5 = 75$	Capacity Exceeds SAE Time Constraints
95252A	15 (14.2)	0.8 (3.0)	82484A	1	$\beta_5 = 75$	
95303A	27 (25.6)	1.2 (4.5)	82537A	1	$\beta_5 = 75$	
95353A	35 (33.1)	1.9 (7.2)	82648A	1	$\beta_5 = 75$	

* Flow rate based on 30 SAE oil at 180 °F (82.2 °C) at 55 lb/in² (379.2 kPa).

Notes:

1. Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.
2. By-pass filter elements can be changed each time full-flow elements are changed or with every other full-flow element change.

Specifications subject to change without notice.



Parts List

Part	Description	Part Number
A	Cover Assembly	See Ordering Information
B	O-Ring	
C	Band Clamp	
D	Housing	
E	Drain Plug	
F	Filter Element	
G	Internal Component Kit	

Ordering Information

D Housing*	A Cover Assembly	B O-Ring	C Band Clamp	E Drain Plug	E Filter Element	F Internal Component Kit
95240J	Q80384A	99955A	Q52860A	Q69171	82421A	990436K
95252A	Q57511A	Q58500	Q53085A	Q69173	82484A	990437K
95303A	Q57597A	99955A	Q52860A	Q69217	82537A	990438K
95353A	Q57597A	99955A	Q52860A	Q69172	82648A	990435K

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.

** Filter does not include an internal by-pass valve. An external by-pass valve can be ordered separately, if required.

Table corresponds to Parts List on previous page.

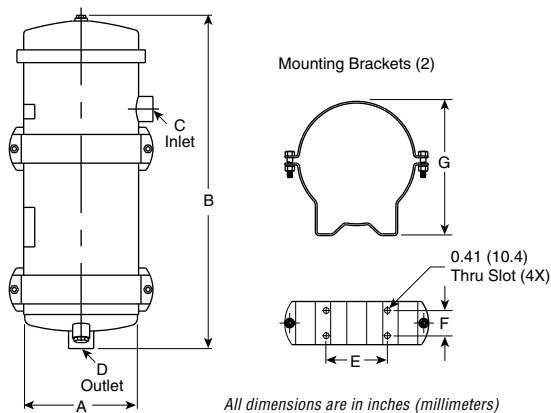
Replacement Filter Elements

Part Number	Description
82421A	$\beta_5 = 75$ Full-Flow Lube Depth Element
82484A	$\beta_5 = 75$ Full-Flow Lube Depth Element
82537A	$\beta_5 = 75$ Full-Flow Lube Depth Element
82648A	$\beta_5 = 75$ Full-Flow Lube Depth Element

Filter Specification

Densely ram-packed cotton provides $\beta_5 = 75$ solid contamination control.

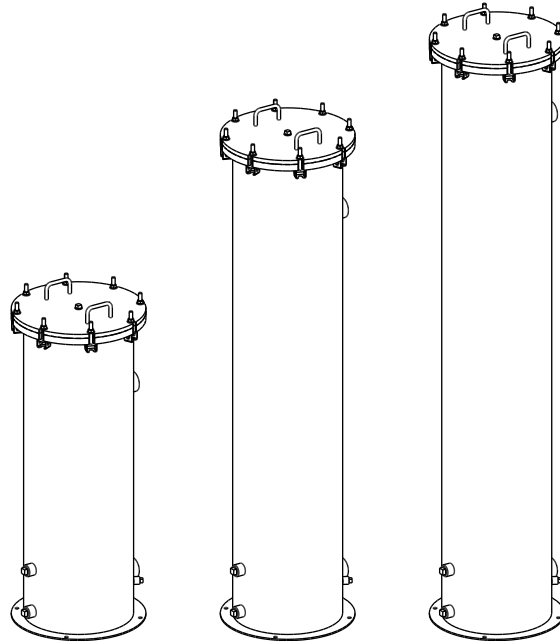
Mounting/Dimensions



Housing* Part Number	A Diameter in (mm)	B Height in (mm)	C Inlet	D Outlet	E Mounting Bracket Hole Horiz. Spacing in (mm)	F Mounting Bracket Hole Vert. Spacing in (mm)	G Mounting Bracket Max. Width in (mm)
95240J	8.6 (218.4)	18 (457.2)	1/4" NPT	1/4" NPT	4.25 (108.0)	1.75 (44.5)	8.97 (227.8)
95252A	8.0 (203.2)	23.0 (584.2)	1" NPT	1/2" NPT	4.25 (108.0)	1.75 (44.5)	9.41 (239.0)
95303A	8.6 (218.4)	30.9 (784.9)	1" NPT	1/2" NPT	4.25 (108.0)	1.75 (44.5)	10.03 (254.8)
95353A	8.6 (218.4)	40.0 (1016.0)	2" NPT	1-1/2" NPT	4.25 (108.0)	1.75 (44.5)	10.03 (254.8)

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.

Full-Flow Filters For Natural Gas Engines, Non-Standard Gas Engines, and Diesel Engine Applications



Type 2

Specifications

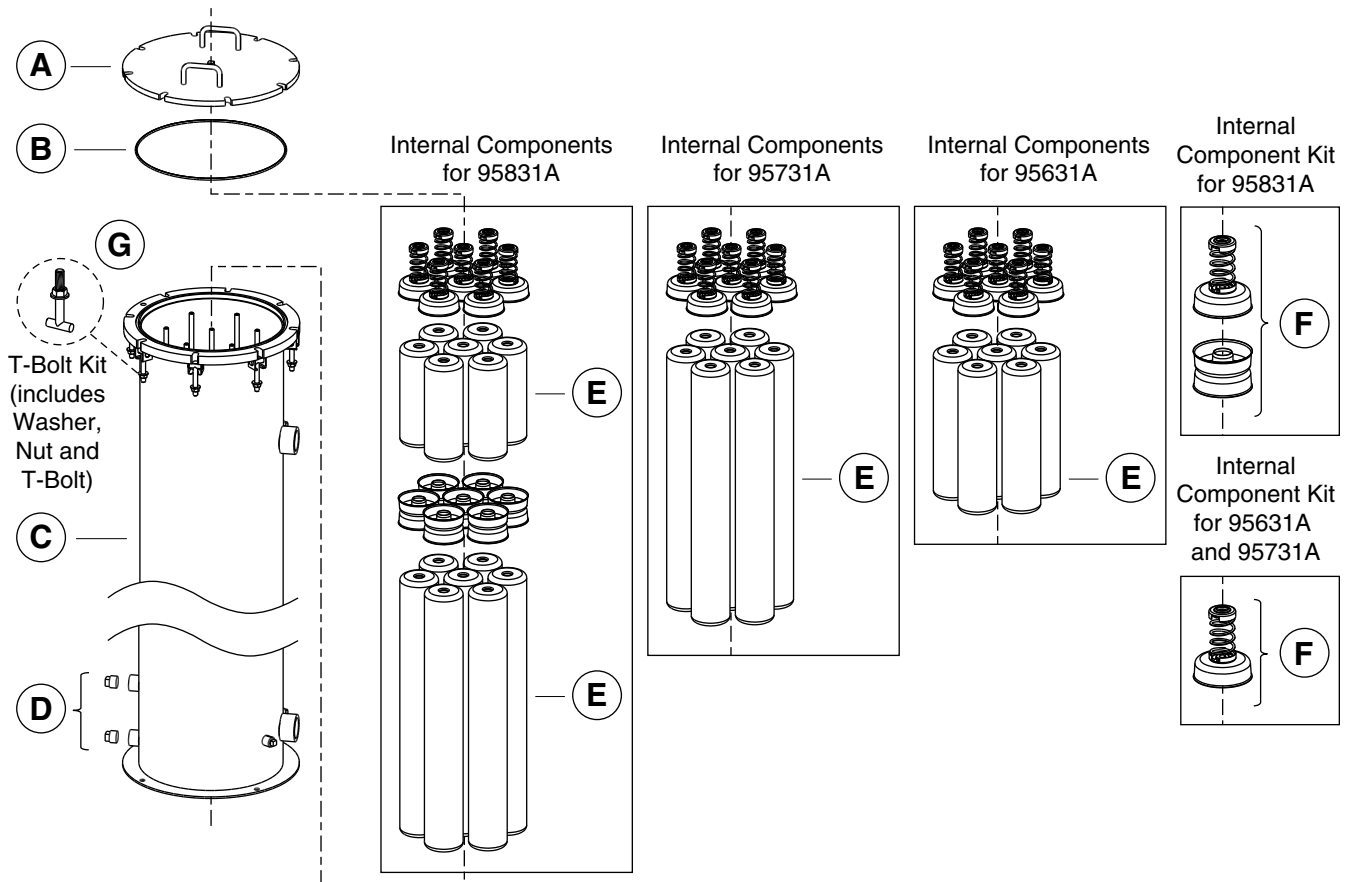
Housing Part Number	Filter Oil Volume qt (L)	Flow Rate* gal/min (L/min)	Element Number	Number of Elements	Efficiency (Particulate Control)	Capacity
95631A	86 (81.4)	45 (170.3)	82370D	7	$\beta_{15} = 2$	Capacity Exceeds SAE Time Constraints
95731A	128 (121.1)	85 (321.8)	82620D	7	$\beta_{15} = 2$	
95831A	170 (160.9)	100 (378.5)	82370A/82620D	(7 each) 14	$\beta_{15} = 2$	

Notes:

1. Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.
2. Initial assembly differential pressure should not exceed 5 PSID (34.5 kPa).
3. Change element after initial differential pressure increases 5-7 PSID (34.5 - 48.3 kPa), depending on engine age and operating oil pressures. A maintenance professional should make the appropriate application decision.
4. Terminal assembly differential pressure should not exceed 12 PSID (82.7 kPa).
Specifications subject to change without notice.

Parts List

Part	Description	Part Number
A	Cover	See Ordering Information
B	O-Ring	
C	Housing	
D	Plugs (NPT)	
E	Filter Elements	
F	Internal Component Kit	
G	T-Bolt Kit	



Ordering Information

C	A	B	D	E	F	G	
Housing*	Cover	O-Ring	Plugs	Filter Element	Number of Elements	Internal Component Kit	T-Bolt Kit
95631A**	Q80660A	Q79058	Q69009	82370D	7	990440K	990449K
95731A**	Q80660A	Q79058	Q69217	82620D	7	990440K	990449K
95831A**	Q80660A	Q79058	Q69217	82370D/82620D	(7 each) 14	990441K	990449K

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.

** Filter does not include an internal by-pass valve. An external by-pass valve can be ordered separately, if required.

Table corresponds to Parts List on previous page.

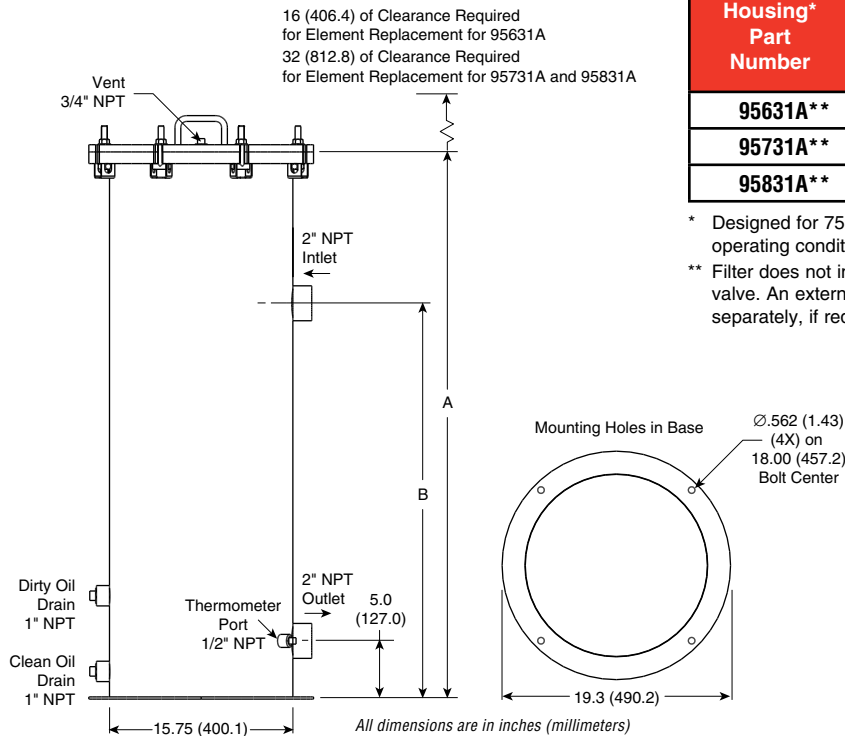
Replacement Filter Elements

Part Number	Description
82370D	$\beta_{15} = 2$ Full-Flow Lube Depth Element
82370D	$\beta_{15} = 2$ Full-Flow Lube Depth Element
82620D	$\beta_{15} = 2$ Full-Flow Lube Depth Element

Filter Specification

Composed of a high flow media and a dense cotton/wood blend media section. The high flow media (Controlled Pressure or CP section) permits highly viscous cold oil to flow through the element and filter during cold engine starts. Provides $\beta_{15} = 2$ solid contamination control.

Mounting/Dimensions

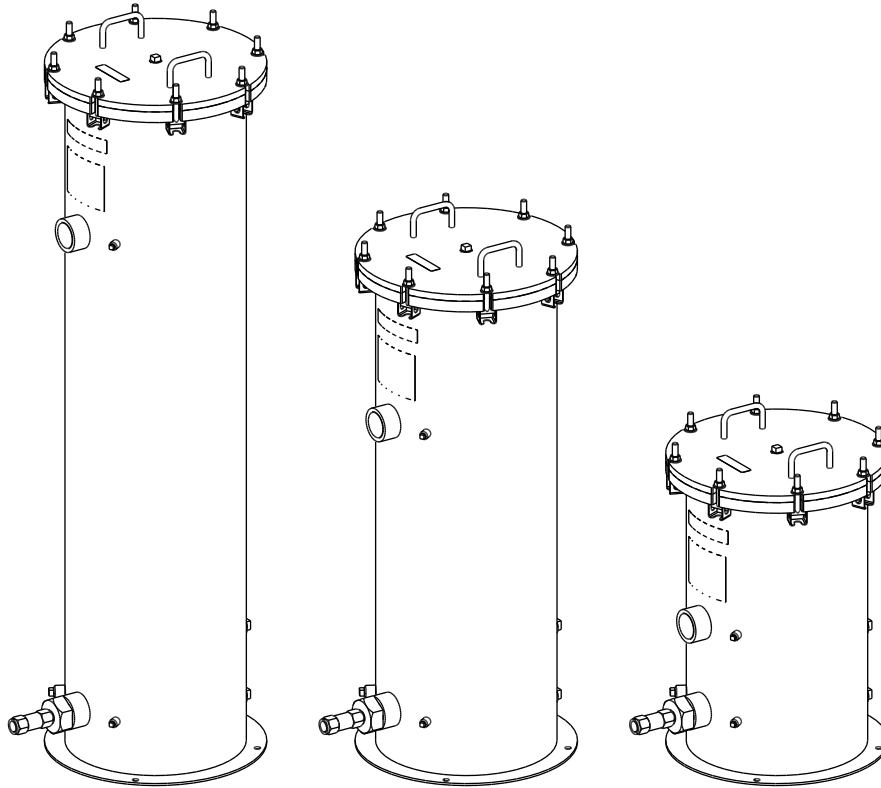


Housing* Part Number	A Overall Height in (mm)	B Inlet Height in (mm)
95631A**	31.0 (787.4)	18.0 (457.2)
95731A**	47.0 (1193.8)	34.0 (863.6)
95831A**	63.0 (1600.2)	50.0 (1270.0)

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.

** Filter does not include an internal by-pass valve. An external by-pass valve can be ordered separately, if required.

By-Pass Filters
For Natural Gas Engines, Non-Standard Gas Engines,
and Diesel Engine Applications



Type 3

Specifications

Housing Part Number	Filter Oil Volume qt (L)	Flow Rate* gal/min (L/min)	Element Number	Number of Elements	Efficiency (Particulate Control)	Capacity
95633A	86 (81.4)	3.0 (11.4)	82377A	7	$\beta_5 = 75$	Capacity Exceeds SAE Time Constraints
95733A	128 (121.1)	5.6 (21.2)	82377A	14	$\beta_5 = 75$	
95833A	170 (160.9)	8.2 (31.0)	82377A	21	$\beta_5 = 75$	

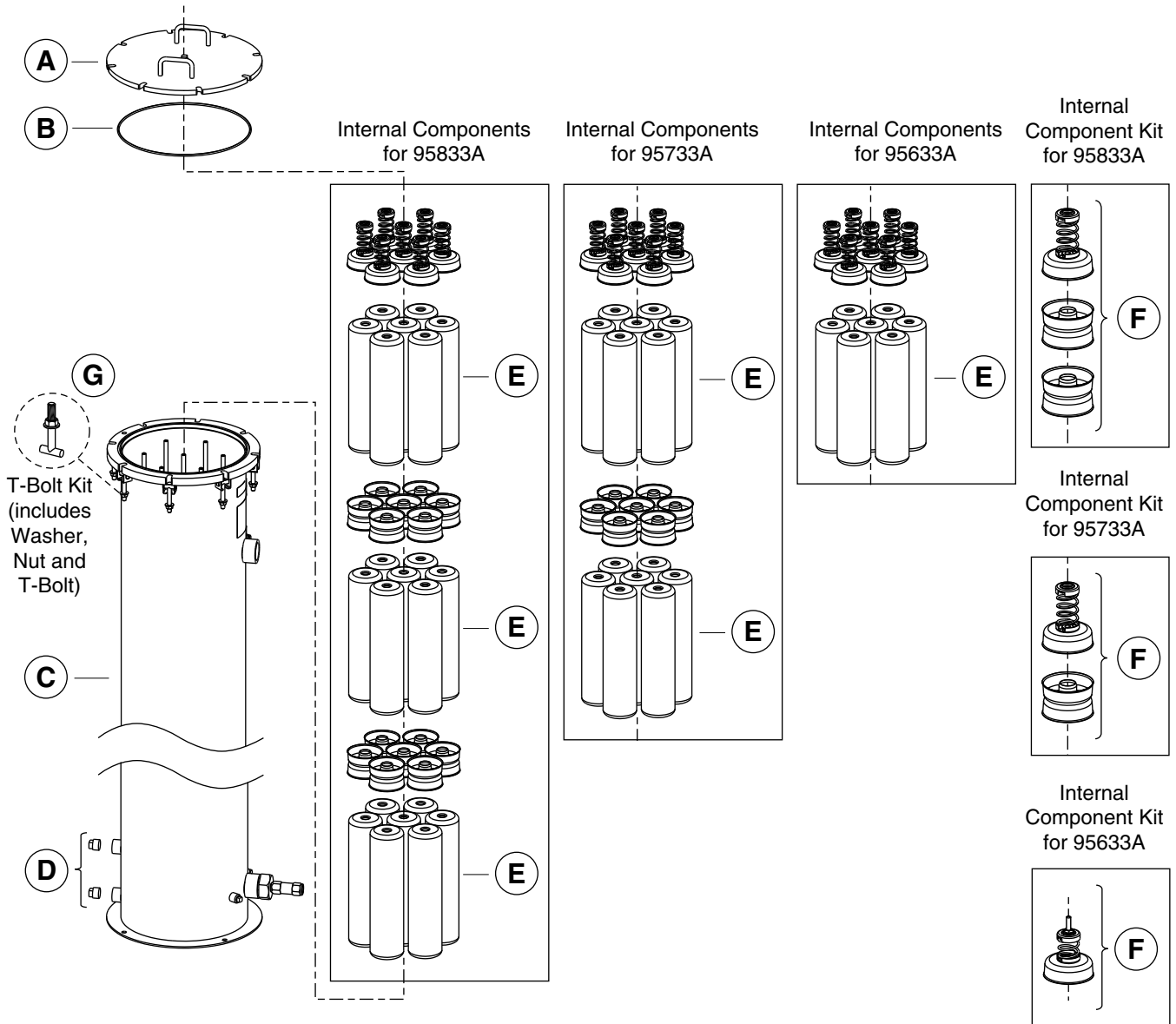
* Flow rate based on 30 SAE oil at 180 °F (82.2 °C) at 55 lb/in² (379.2 kPa).

Notes:

1. Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.
2. By-pass filter elements can be changed each time full-flow elements are changed or with every other full-flow element change. Specifications subject to change without notice.

Parts List

Part	Description	Part Number
A	Cover	See Ordering Information
B	O-Ring	
C	Housing	
D	Plugs	
E	Filter Elements	
F	Internal Component Kit	
G	T-Bolt Kit	



Ordering Information

C Housing*	A Cover	B O-Ring	D Plugs	E Filter Element	Number of Elements	F Internal Component Kit	G T-Bolt Kit
95633A	Q80660A	Q79058	Q69217	82377A	7	990440K	990449K
95733A	Q80660A	Q79058	Q69217	82377A	14	990441K	990449K
95833A	Q80660A	Q79058	Q69217	82377A	21	990442K	990449K

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.
Table corresponds to Parts List on previous page.

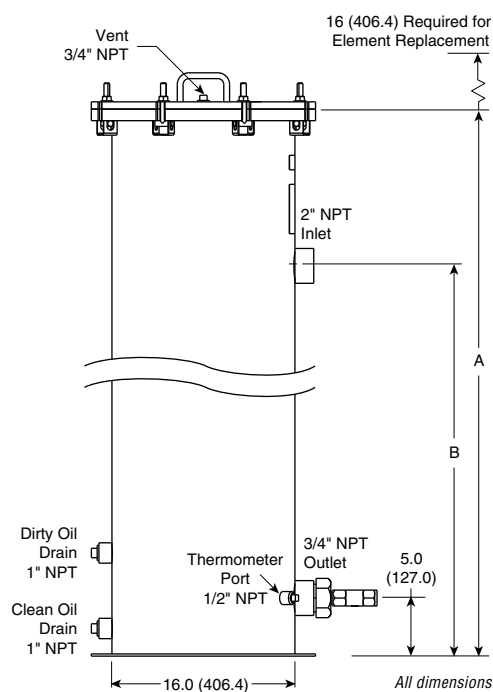
Replacement Filter Element

Part Number	Description
82377A	$\beta_5 = 75$ Full-Flow Lube Depth Element

Filter Specification

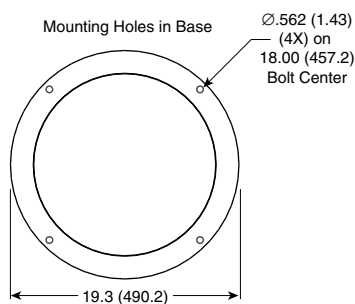
Densely ram-packed cotton provides $\beta_5 = 75$ solid contamination control.

Mounting/Dimensions

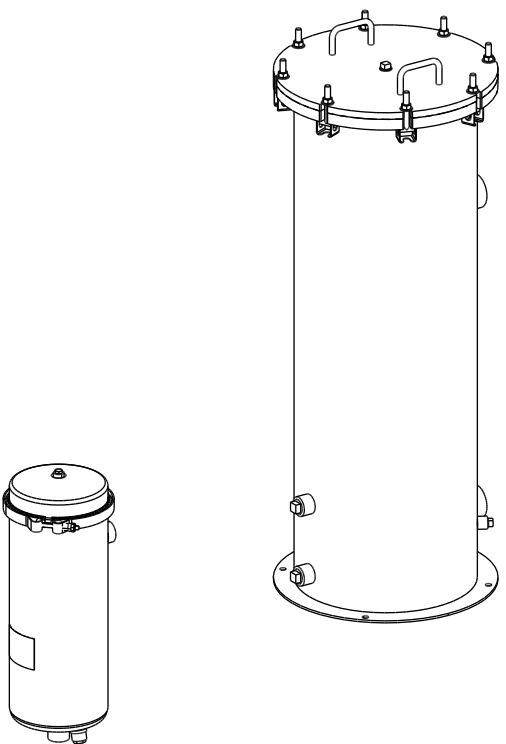


Housing* Part Number	A Overall Height in (mm)	B Inlet Height in (mm)
95633A	31.0 (787.4)	18.0 (457.2)
95733A	47.0 (1193.8)	34.0 (863.6)
95833A	63.5 (1612.9)	50.0 (1270.0)

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.



Winslow® Liquid Fuel Filters



Winslow® Fuel Filtration Systems

Winslow depth filtration gives the best protection against all types of fuel contaminants. The densely packed organic materials filter not only the solid particulates – including catalyst fines – but semi-solids, petroleum gums, asphaltenes and other organic compounds through absorption and adsorption by the depth media.

Simple pleated paper filters cannot provide this protection because they filter on a barrier or screen principle. Winslow acts more as a sponge to absorb and adsorb the contaminants while allowing cleaned fuel to pass through.

To assure clean fuel, the Winslow filter is installed alone, after a centrifuge or in a primary or secondary manner, depending on the situation. When high water and particulate concentrations are common, a Winslow primary fuel filter followed by a secondary fuel/water coalescer is the ideal solution for aviation to M-1 marine diesel fuels.

Other contaminants that can be prevalent in fuels are sodium compounds, water (which may contain dissolved sodium salts), asphaltenes, petroleum gums and numerous solids at high levels. Water and the consequential bacteria which develop, are commonly found in fuels through leakage, condensation, poor fuel handling or a combination of these.

Longer Service Life and the Best Protection

In normal engine operation, the service life of a filter element is determined by its capacity to hold contaminants without reaching the pre-determined differential pressure across the filter. The capacity of an element is determined by the amount of media in the element and the absorbency of the media. Depth elements outlast pleated media because the cellular fibers absorb more contaminants and do not coat over, causing premature high differential pressures.

Winslow Liquid Fuel Filters depth elements hold up to two times their weight in contaminants because wood fiber keeps the cotton from compacting, so the element can retain its porosity longer and absorb large quantities of contaminants. This ram packed construction eliminates channeling to provide constant efficiencies over life of the element.

Market

Winslow fuel filters are recommended wherever fuel quality cannot be controlled or predicted. Power generating stations, pipelines and marine engines worldwide are using all types and grades of liquid fuel. The degree of contamination varies as well as the degradation which takes place when fuel is stored. Winslow fuel filters can be used in applications from #2 distillate to residual fuels for marine, mining equipment, drilling rigs, over-the-road trucks and stationary engines.

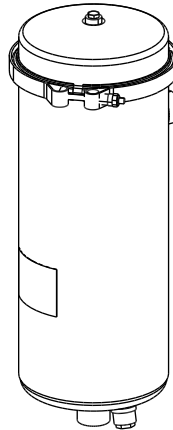
Fuel Handling

- Better fuel handling maintenance by providing clean and water-free fuel to your storage tank and engine
- Longer filter life as it resists (unlike standard pleated paper media) choking from asphaltenes, a soft hydrocarbon inherent in most fossil fuels
- Longer life for on-engine OEM supplied fuel filters
- Longer fuel storage life

Turbines

- More complete combustion with less exhaust smoke
- Fewer deposits on turbine blades
- Less metallic corrosion of turbine blades and vanes with lower grade fuels
- Longer hot section life between overhauls

**Standard Design
For Reciprocating and Gas Turbine Engine Applications
#2 Diesel to Heavy Fuel**



Type 1

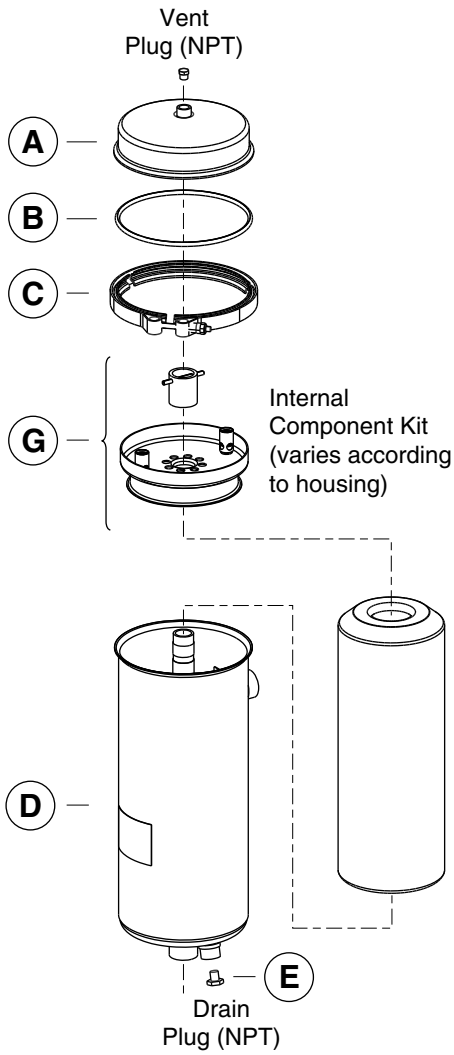
Specifications

Housing Part Number	Flow Rate* gal/min (L/min)	Element Number	Chemically Treated Part Number	Number of Elements	Efficiency (Particulate Control)	Capacity
95200A	10 (37.8)	82375A	82371A	1	$\beta_5 = 2$	Capacity Exceeds SAE Time Constraints
95250A	15 (56.8)	82482A	N/A	1	$\beta_5 = 2$	
95300A	20 (75.7)	82534A	N/A	1	$\beta_5 = 2$	
95350A	35 (132.5)	82645A	82646A	1	$\beta_5 = 2$	

* Flow rate based on #2 Diesel fuel with a maximum viscosity of 4.63 mm²/s. For residual and heavy fuel blends, Contact Cummins Filtration® Technical Assistance.

Notes:

1. Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.
 2. Initial assembly differential pressure should not exceed 3 PSID (20.7 kPa) on the pressure side (downstream) of the pump.
 3. Change element after initial differential pressure increases 3-4 PSID (20.7-27.6 kPa), depending on engine age and operating oil pressures. A maintenance professional should make the appropriate application decision.
 4. Terminal assembly differential pressure should not exceed 7 PSID (48.3 kPa).
- Specifications subject to change without notice.



Parts List

Part	Description	Part Number
A	Cover Assembly	See Ordering Information on Following Page
B	O-Ring	
C	Band Clamp	
D	Housing	
E	Filter Element	
F	Internal Component Kit	

Ordering Information

D Housing*	A Cover Assembly	B O-Ring	C Band Clamp	E Drain Plug	F Filter Element	G Internal Component Kit
95200A	Q57508A	Q58510	Q53086A	Q69172	82375A	990446K
95250A	Q57511A	Q58500	Q53085A	Q69173	82482A	990437K
95300A	Q57597A	99955A	Q52860A	Q69217	82534A	990448K
95350A	Q57597A	99955A	Q52860A	Q69217	82645A	990435K

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.
Table corresponds to Parts List on previous page.

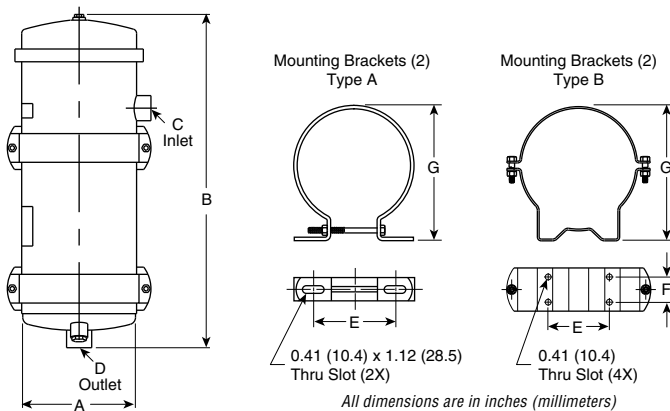
Replacement Filter Elements

Part Number	Description
82375A	$\beta_5 = 2$ Full-Flow Lube Depth Element
82482A	$\beta_5 = 2$ Full-Flow Lube Depth Element
82534A	$\beta_5 = 2$ Full-Flow Lube Depth Element
82645A	$\beta_5 = 2$ Full-Flow Lube Depth Element

Filter Specification

Composed of a high flow cotton/wood media blend to provide $\beta_5 = 2$ solid contamination control.

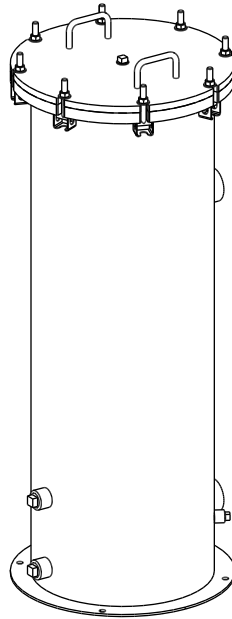
Mounting/Dimensions



Housing* Part Number	A Diameter in (mm)	B Height in (mm)	C Inlet/Outlet	E Mounting Bracket Hole Horiz. Spacing in (mm)	F Mounting Bracket Hole Vert. Spacing in (mm)	G Mounting Bracket Max. Width in (mm)	Bracket Type
95200A	6.0 (152.4)	20.5 (520.7)	1" NPT	4.38 (111.25)	–	7.04 (178.8)	A
95250A	8.0 (203.2)	23.0 (584.2)	1" NPSF	4.25 (108.0)	1.75 (44.5)	9.42 (239.3)	B
95300A	8.6 (218.4)	31.7 (805.2)	2" NPT	4.25 (108.0)	1.75 (44.5)	10.03 (254.8)	B
95350A	8.6 (218.4)	40.0 (1016.0)	2" NPT	4.25 (108.0)	1.75 (44.5)	10.03 (254.8)	B

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.

**Standard Design
For Reciprocating and Gas Turbine Engine Applications
#2 Diesel to Heavy Fuel**



Type 2

Specifications

Housing Part Number	Flow Rate* gal/min (L/min)	Element Number	Chemically Treated Part Number	Number of Elements	Efficiency (Particulate Control)	Capacity
95730A	70 (265.0)	82375A	82371A	14	$\beta_5 = 2$	Capacity Exceeds SAE Time Constraints
95830A	100 (378.5)	82375A	82371A	21	$\beta_5 = 2$	

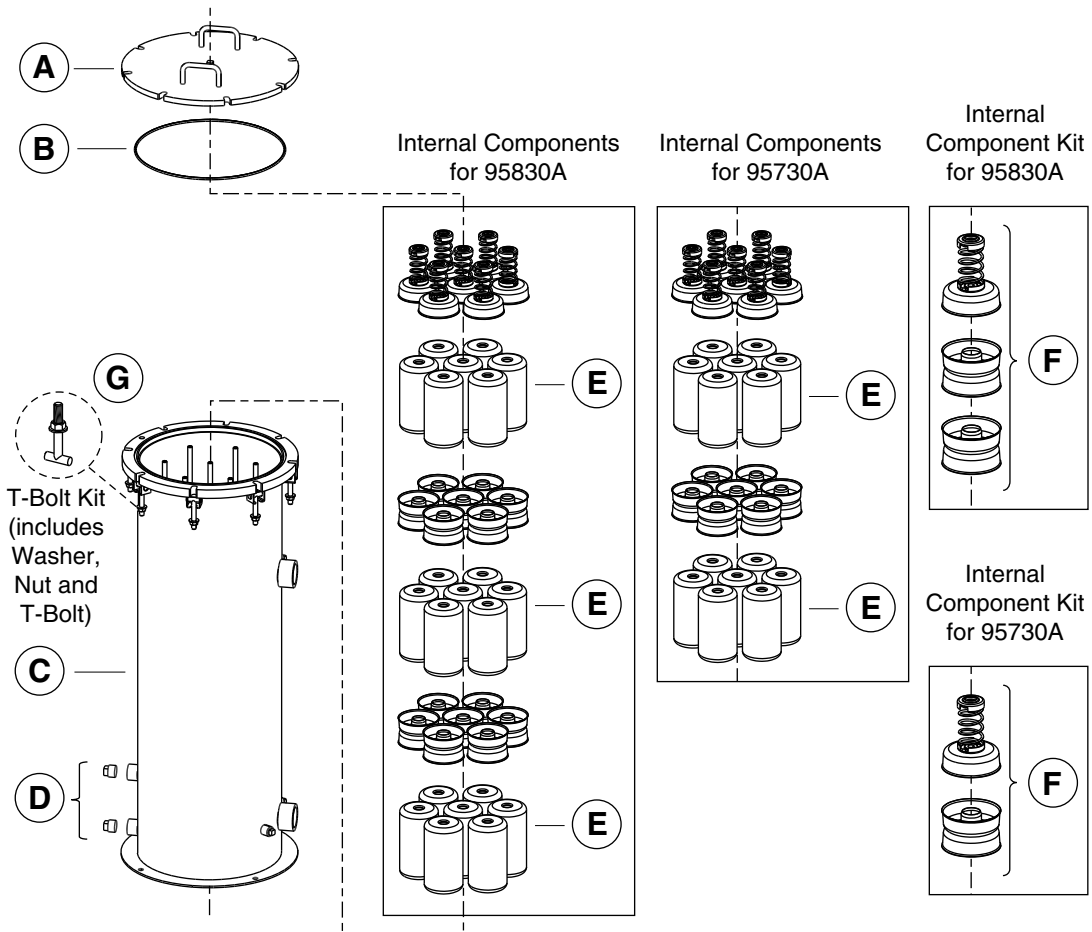
* Flow rate based on #2 Diesel fuel with a maximum viscosity of 4.63 mm²/s. For residual and heavy fuel blends, Contact Cummins Filtration®.

Notes:

1. Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.
 2. Initial assembly differential pressure should not exceed 3 PSID (20.7 kPa) on the pressure side (downstream) of the pump.
 3. Change element after initial differential pressure increases 3-4 PSID (20.7-27.6 kPa), depending on engine age and operating oil pressures. A maintenance professional should make the appropriate application decision.
 4. Terminal assembly differential pressure should not exceed 7 PSID (48.3 kPa).
- Specifications subject to change without notice.

Parts List

Part	Description	Part Number
A	Cover	See Ordering Information
B	O-Ring	
C	Housing	
D	Plugs	
E	Filter Elements	
F	Internal Component Kit	
G	T-Bolt Kit	



Ordering Information

C Housing*	A Cover	B O-Ring	D Plugs	E Filter Element	Number of Elements	F Internal Component Kit	G T-Bolt Kit
95730A	Q80660A	Q79058	Q69009	82375A	14	990441K	990449K
95830A	Q80660A	Q79058	Q69009	82375A	21	990442K	990449K

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.
Table corresponds to Parts List on previous page.

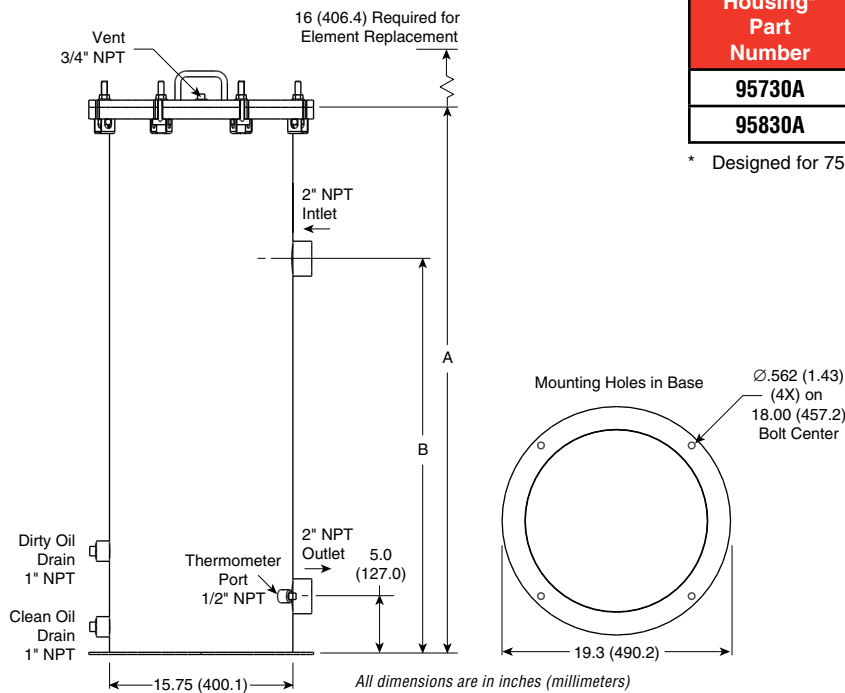
Replacement Filter Element

Part Number	Description
82375A	$\beta_5 = 2$ Full-Flow Lube Depth Element

Filter Specification

Composed of a high flow cotton/wood media blend to provide $\beta_5 = 2$ solid contamination control.

Mounting/Dimensions

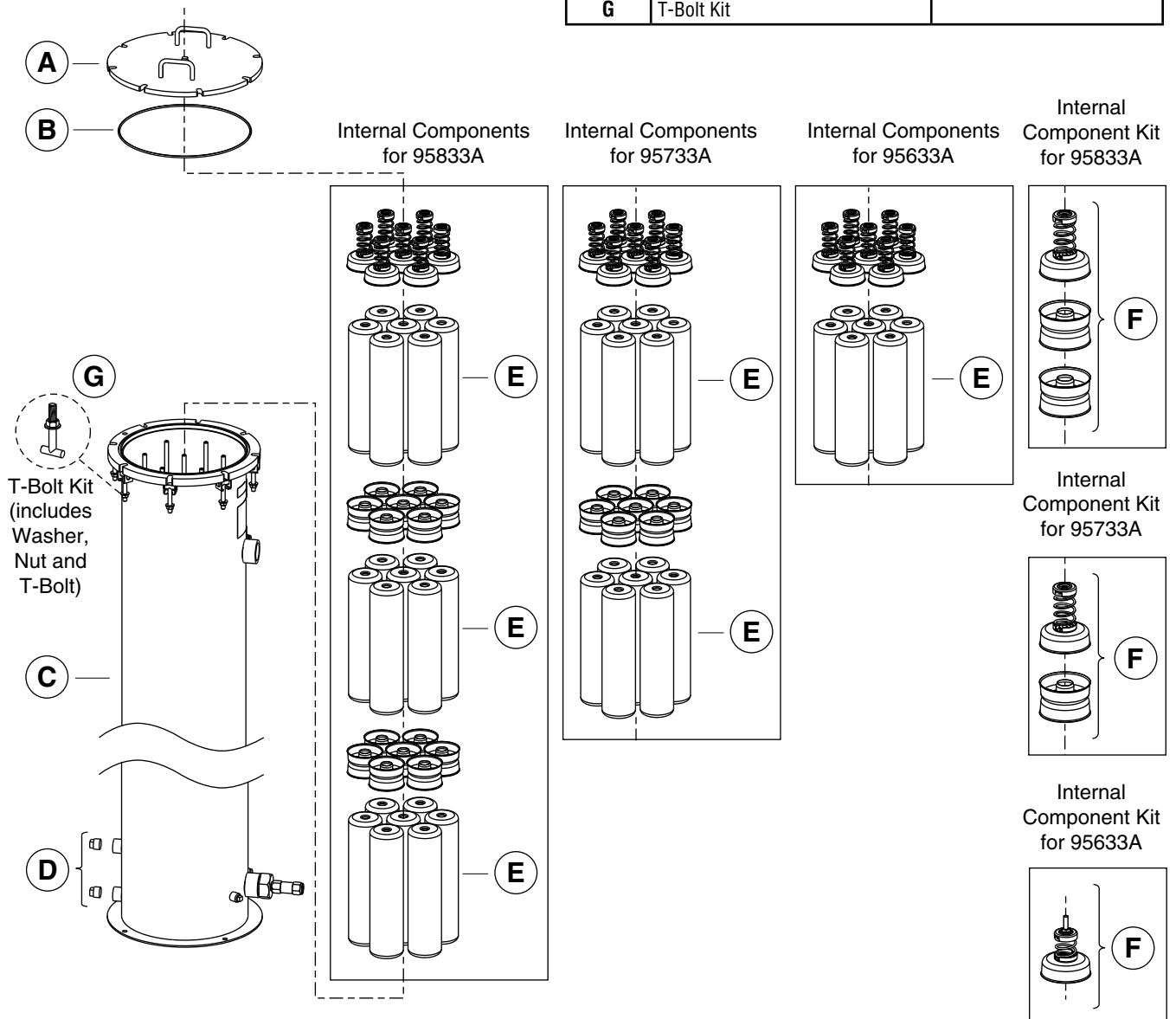


Housing* Part Number	A Overall Height in (mm)	B Inlet Height in (mm)
95730A	47.0 (1193.8)	34.0 (863.6)
95830A	63.0 (1600.2)	50.0 (1270.0)

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.

Parts List

Part	Description	Part Number
A	Cover	See Ordering Information on Page 5
B	O-Ring	
C	Housing	
D	Plugs	
E	Filter Elements	
F	Internal Component Kit	
G	T-Bolt Kit	



⚠ CAUTION: These instructions are intended for use by professional mechanics who are trained in the proper use of power and hand tools, using appropriate safety precautions (including eye protection).

Introduction

Winslow® filter elements must be changed periodically to assure the high level of filtration efficiencies required by today's engines. By-pass filter elements should be serviced and changed based on comparative oil analyses. Significant changes in TBN/TAN (Total Base Number/Total Acid Number), oxidation, and nitration should be identified, monitored, and acted upon.

Lube filtration is much more sophisticated than hydraulic fluid filtration. Most engine filters not only combat particulate (wear) matter, but also chemical (corrosion) contamination. The main contributor for the chemical contaminants is combustion cylinder blow-by gas. These contaminants (oxides, nitrates, soot, acids, and water) are by-products of the combustion process and are able to flow past the piston rings and enter the oil sump. Since the Winslow bypass elements absorb these contaminants without a significant increase in restriction, standard methods (a rise in restriction) used to determine an element's life cannot be used on these applications.

An increase in element restriction can be used as an indicator of a plugged element in applications with an extremely high solid contamination (for example, hydraulic and machine tool fluids). For these applications, the elements should be changed out when the increase in restriction reaches 3 PSID (20.7 kPa) above the clean element restriction, however elements should be changed, at minimum, once a year.

Servicing the Filter

Removing the Filter Elements

1. Shut off the flow to the filter. Isolate the filter, if possible, by closing the main upstream valve and then the main downstream valve.
2. Shut off electrical power to any accessories attached to the vessel.

3. Remove the air vent plug to equalize the pressure in the tank.

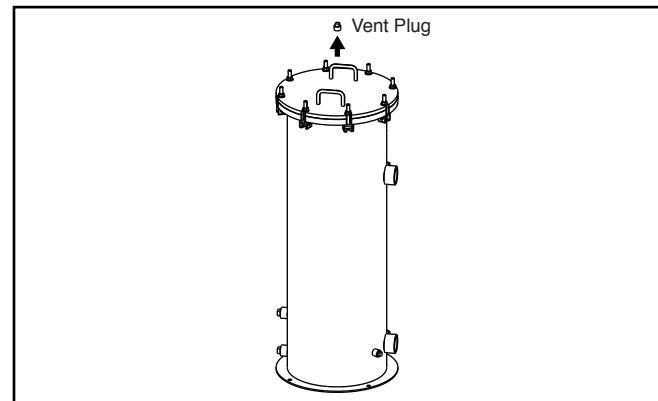


Figure 1 – Removing the Air Vent Plug

4. Remove the “dirty oil” drain plug (upper plug) and completely drain the filter chamber.

⚠ CAUTION Fluid may be hot!

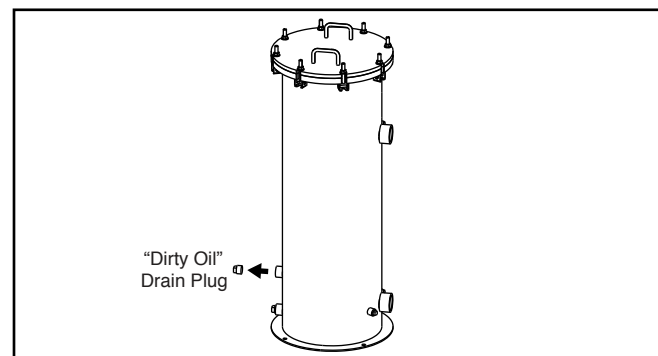


Figure 2 – Removing the “Dirty Oil” Drain Plug

5. Loosen the nuts on the cover until the T-bolts are free to swing out of position.

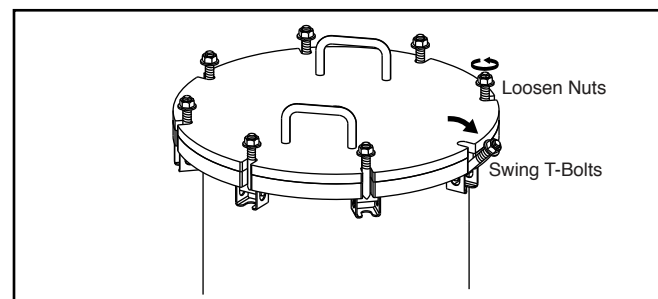


Figure 3 – Freeing the Cover

6. Lift the cover STRAIGHT UP.

⚠ CAUTION To prevent damage to the cover gasket and the sealing surfaces, **DO NOT SLIDE THE COVER OFF.**

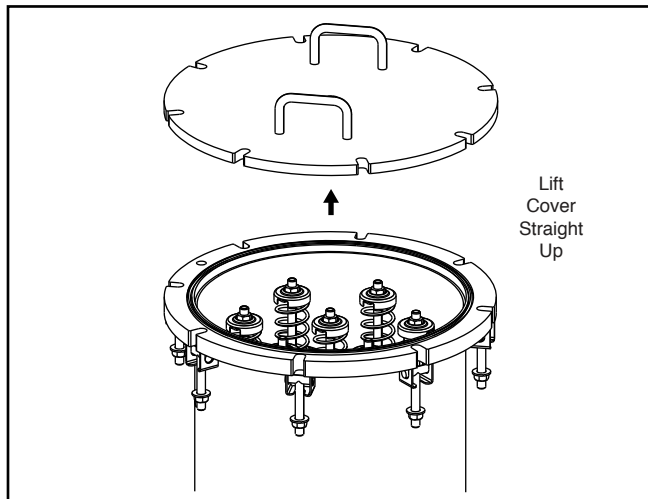


Figure 4 – Lifting the Cover Off

7. Place the cover UPSIDE DOWN on a clean work surface. Be careful not to nick or scratch the bottom edge of the sealing surface.
8. Loosen the hex nuts on the element support posts to free the internal components.

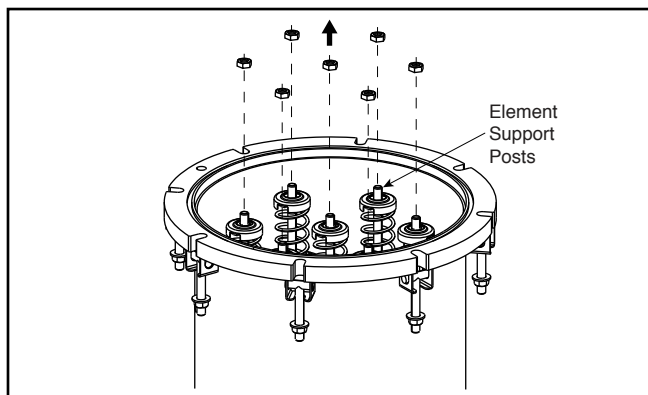


Figure 5 – Freeing the Internal Components

9. Loosen and remove the internal components, including the dirty elements (components vary according to housing – see page 1). Pull the elements straight up to remove. Dispose of the elements in an environmentally responsible manner, according to state and/or federal (EPA) recommendations.

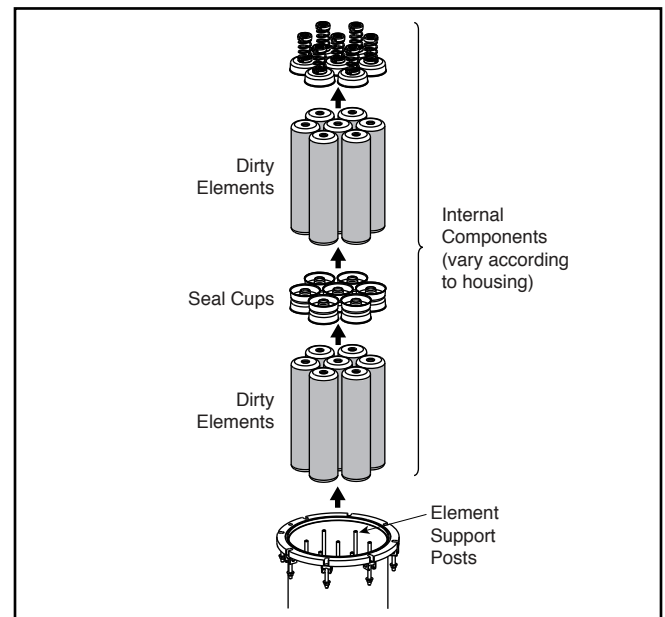


Figure 6 – Removing the Internal Components

⚠ CAUTION To prevent damage to your engine or equipment, do not allow dirt to fall through the opening of the element support post and into the clean outlet area.

Reassembling the Filter

10. Reinstall the internal components, including the new elements. Note the direction of the arrow on each element and insert the proper end into the housing first. If seal cups are included as part of the internal components, they must be reinstalled, as well.

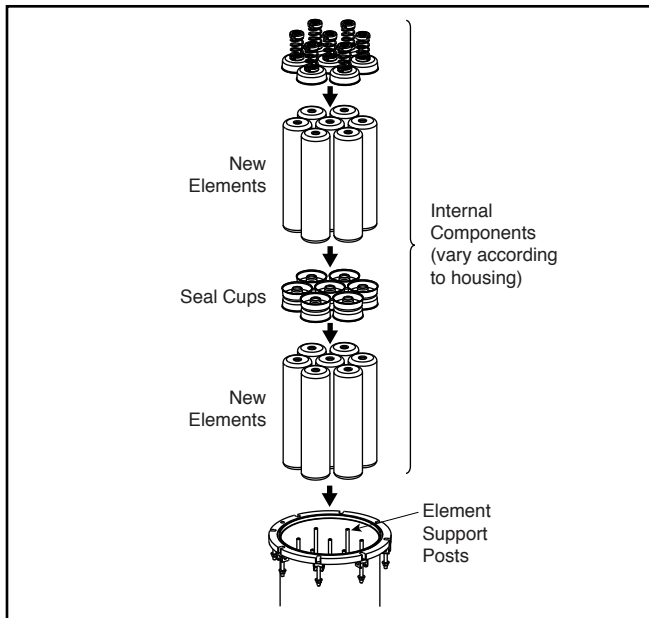


Figure 7 – Reinstalling the Internal Components

11. Replace the hex nuts onto the element support posts and tighten until the threads bottom-out.

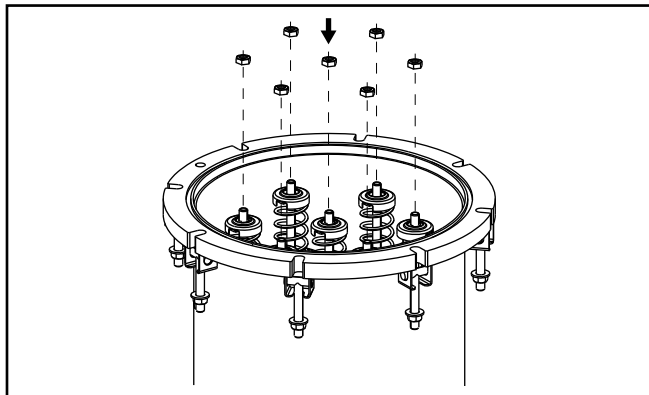


Figure 8 – Replacing the Hex Nuts

12. Replace the O-ring cover seal. (If necessary, as long as there are no permanent surface deformations, swelling, nicks, and cracks present, the seal can be reused.)

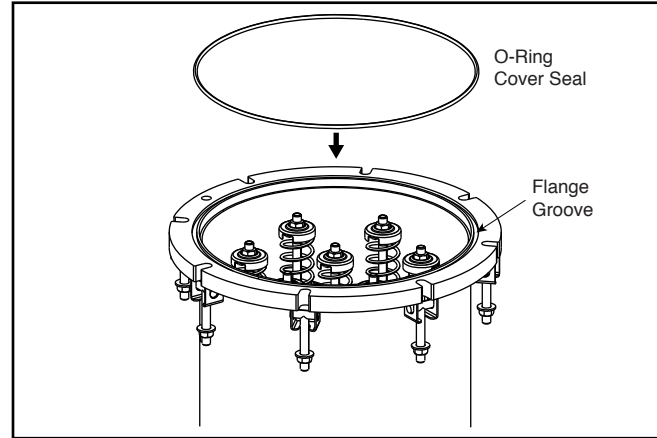


Figure 9 – Replacing the O-Ring Cover Seal

13. Seat the O-ring cover seal into the flange groove.

14. Carefully replace the cover STRAIGHT DOWN and align the bolt slots in the cover flange with the slots in the housing flange.

⚠ CAUTION To prevent damage to the cover gasket and the sealing surfaces, **DO NOT SLIDE THE COVER ON.**

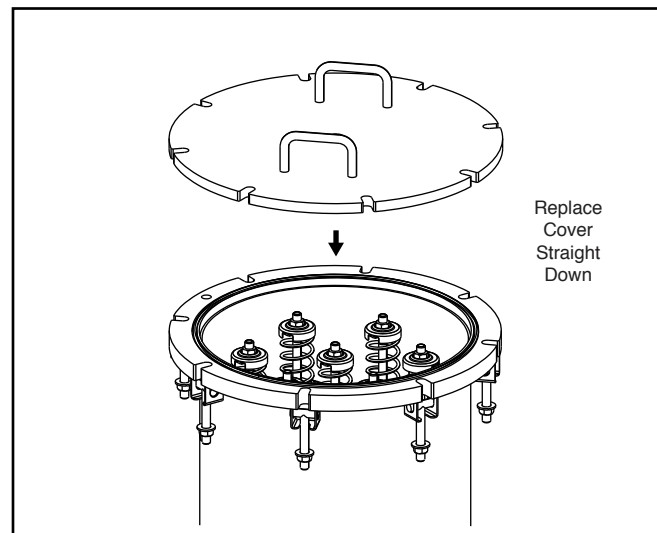


Figure 10 – Replacing the Cover

- Swing the T-bolts into position and tighten all the nuts in a star pattern (similar to replacing lug nuts on an automobile wheel) to assure a uniform seal.

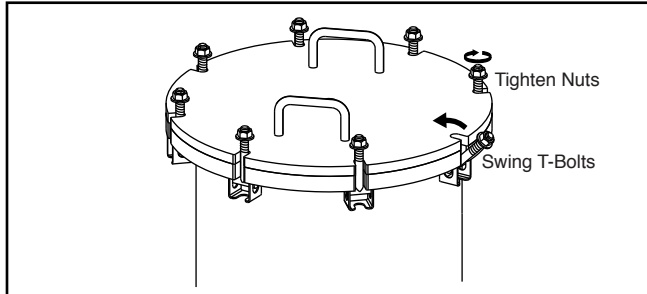


Figure 11 – Securing the Cover

- Reinstall the “dirty oil” drain plug.

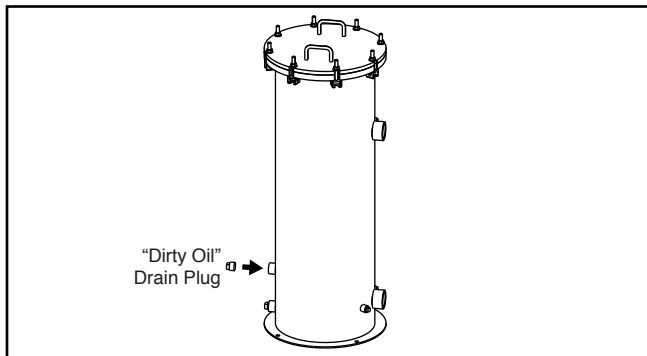


Figure 12 – Reinstalling the “Dirty Oil” Drain Plug

- Refill the filter manually or by slowly opening the main upstream valve.
- Once the vessel is full, reinstall the vent plug.

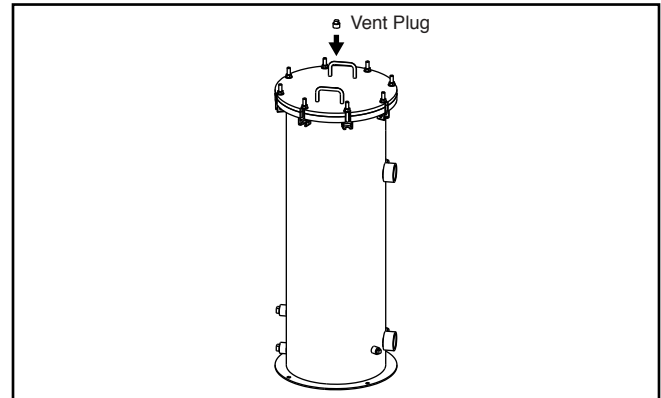


Figure 13 – Replacing the Vent Plug

- Increase the pressure in the filter slowly. Inspect for leaks around the cover gasket area. If no leaks are visible, increase to operating pressure.
- Inspect for leaks again.
- Reconnect electrical power to any accessories.
- Slowly open the downstream valve, if applicable, placing the unit in service.
- Read and record the pressure differential of the clean elements.
- The filter is now operational.

Suggested Preventive Maintenance

Every Filter Change – Replace the O-ring cover seal.

Every 12 Months – Check all fittings for leaks.

Ordering Information

C	A	B	D	E		F	G
Housing*	Cover	O-Ring	Plugs	Filter Element	Number of Elements	Internal Component Kit	T-Bolt Kit
95633A	Q80660A	Q79058	Q69217	82377A	7	990440K	990449K
95733A	Q80660A	Q79058	Q69217	82377A	14	990441K	990449K
95833A	Q80660A	Q79058	Q69217	82377A	21	990442K	990449K

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.
Table corresponds to Parts List on cover page.

Replacement Filter Element

Part Number	Description
82377A	$\beta_5 = 75$ Full-Flow Lube Depth Element

Filter Specification

Densely ram-packed cotton provides $\beta_5 = 75$ solid contamination control.

Specifications

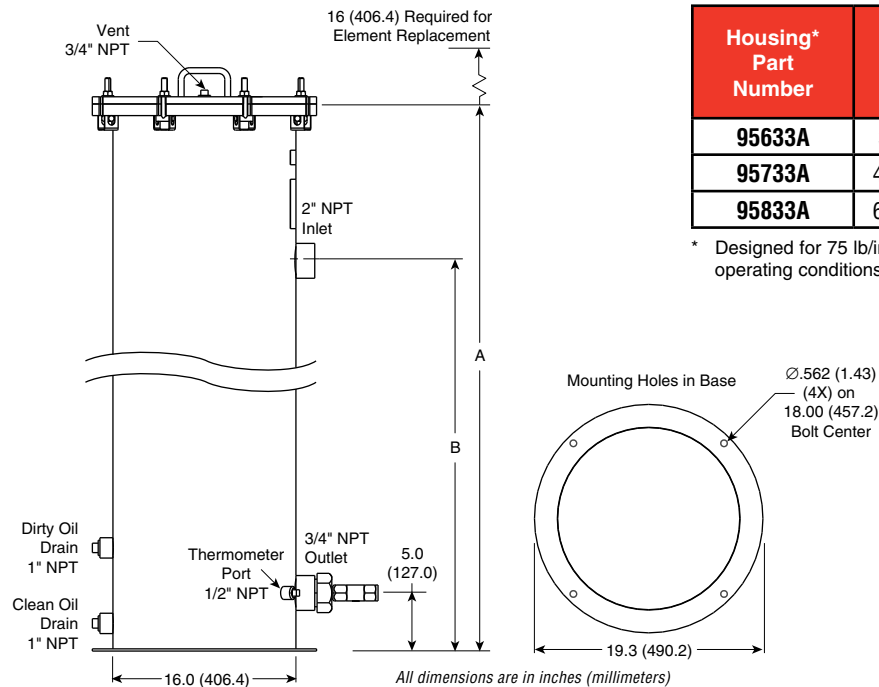
Housing Part Number	Filter Oil Volume qt (L)	Flow Rate* gal/min (L/min)	Element Number	Number of Elements	Efficiency (Particulate Control)	Capacity
95633A	86 (81.4)	3.0 (11.4)	82377A	7	$\beta_5 = 75$	Capacity Exceeds SAE Time Constraints
95733A	128 (121.1)	5.6 (21.2)	82377A	14	$\beta_5 = 75$	
95833A	170 (160.9)	8.2 (31.0)	82377A	21	$\beta_5 = 75$	

* Flow rate based on 30 SAE oil at 180 °F (82.2 °C) at 55 lb/in² (379.2 kPa).

Notes:

1. Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.
 2. By-pass filter elements can be changed each time full-flow elements are changed or with every other full-flow element change.
- Specifications subject to change without notice.

Mounting/Dimensions



Housing* Part Number	A Overall Height in (mm)	B Inlet Height in (mm)
95633A	31.0 (787.4)	18.0 (457.2)
95733A	47.0 (1193.8)	34.0 (863.6)
95833A	63.5 (1612.9)	50.0 (1270.0)

* Designed for 75 lb/in² (517.1 kPa) continuous operating conditions.

