SINCE 1908 wessels company

Installation & Operating Instructions

Product Instruction Data

I. Shut Down and Cover Removal Procedure

WARNING: Do not attempt to open this filter while inlet or outlet valves are open or while unit contains pressure.

1. Inlet or pressure side should always be closed first.
2. Close outlet or discharge side.

NOTE: Any pressure which may be in the filter vessel after inlet and outlet valves have been closed MUST be vented before attempting to open vessel. Care should be taken to keep face and hands protected and clear of filter vessel while venting the filter vessel.

3. Carefully & slowly open side and bottom drains.
4. Carefully & slowly open the vent.

NOTE: Bag & horizontal filters have bottom drain ONLY. Draining liquid from the bottom drain on vertical cartridge and oil filter vessels is not necessary to change media.

CAUTION: Do not at any time remove or loosen closure bolts before venting. Failure to open vent can result in pressurized fluid being trapped in the vessel. Fluid may spray out when bolts are loosened causing personal injury or damage to equipment

5. When liquid has drained and all pressure has been released, loosen cover nuts in an alternate diagonal pattern.

NOTE: Some larger cartridge filters will have either 3 or 4 longer bolts. These long bolts are used to aid in opening & closing the cover against the force of the cartridge compression springs. When the eye nut is free on the long bolts, slide the spacer down the shank of the bolt and reposition the bolt & nut over the cover. Loosen all nuts until the bolts are free to swing aside. If hex nuts are used, spacers are not required.

6. Vertical vessels may have either a mechanical cover lift with hand wheel or a hydraulic cover lift, depending on model and options ordered. Raise the cover high enough to clear the cartridge compression springs and swing cover aside. Horizontal cartridge vessels have a cover supported by a swing-arm.

II. Properties of Gasket Materials

These are general guidelines used to determine the suitability of an O-ring gasket in a specific application. Contact Wessels Customer Service at 317-888-9800.

	Max. Oper. Temp.	Resistance to Acids	Resistance to Alkalis	Resistance to Petroleum Oils	Resistance to Water Swelling	Resistance to Animal and Vegetable Oils	Resistance to Solvents			
							Lacquers and Thinners	Aliphatic Hydrocarbon Gasoline, etc.	Aromatic Hydrocarbon Benzene, etc.	Oxygen-ated Ketones, etc.
Nat.Rub	180	Fair	Fair	Poor	Excellent	Poor	Poor	Poor	Poor	Good
Buna-N	250	Poor	Poor	Excellent	Excellent	Excellent	Poor	Excellent	Fair	Good
Neoprene	250	Good	Good	Good	Good	Good	Poor	Good	Fair	Poor
Butyl	250	Excellent	Excellent	Poor	Excellent	Excellent	Excellent	Poor	Poor	Good
Teflon	500	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Silicone	500	Good	Good	Poor	Excellent	Excellent	Poor	poor	Poor	Excellent
Poly Sulfide (Thiokol)	250	Poor	Poor	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Good
Hypalon	250	Excellent	Excellent	Good	Excellent	Good	Poor	Fair	Poor	Poor
Cellulose	250	Poor	Poor	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Asbestos	850	Fair	Excellent	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Excellent
Viton	400	Excellent	Poor	Excellent	Excellent	Excellent	Poor	Excellent	Excellent	Poor
Ethylene Propylene (Nordel, EMD, EPDM)	300	Excellent	Excellent	Poor	Good	Good	Good	Poor	Poor	Good
Cork	250	Poor	Poor	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Fair

III. Media Replacement

A. Cartridge Filters – CF & MP series cartridge vessels utilize either 10, 20, 30 or 40-inch long filter cartridges. Also, 10 inch cartridges can be multi-stacked with the use of spacers between the cartridge ends. MP vessels use 30 inch or 40 inch long cartridges.

1. Remove top seat plate assembly with compression springs.
2. Remove filter cartridges and discard. Retain spacer if cartridges are multi-stacked.
3. Inspect cartridge guides. In most cases it is not necessary to remove the guide when routinely changing cartridges. Remove & replace guides only if they appear damaged.

NOTE: Guides are not used with extended core cartridges.

4. Clean and inspect filter vessel interior and all components. Also, clean and inspect o-ring and o-ring groove. *
5. Inspect cartridge sump seats.
6. Remove protective wrappings from new filter cartridges. Slide cartridges onto guides. Install spacers between cartridge ends if 10 inch cartridges are multi- stacked.
7. Install top seat plate assemblies onto each cartridge. Compression springs should all be level. If uneven, check for missing spacers.

Top seats not required for closed top (SOE) cartridges.

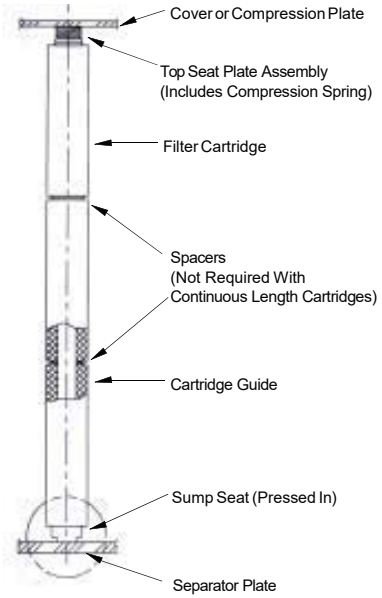

Figure 1

Illustration of Cartridge Filter Internal Components
NOTE: Spacers are not required if continuous length cartridges are used.

B. Oil Filters – LF series cartridge vessels utilize 18 -inch long pleated paper or depth type cartridges stacked either one or two high, or a single 36-inch double length cartridge.

1. Remove top seat plate assembly with compression springs.
2. Remove filter cartridges and discard.
3. Clean and inspect filter interior and all components. Also, clean and inspect o-ring and o-ring groove.
4. Slide new cartridges over standpipe. Spacers are not required when multi-stacking cartridges.
5. Install top seat plate assembly to each upper cartridge.

C. Bag and Strainer Filters - Bag filters utilize filter bags supported by a steel or stainless steel perforated basket. Strainer filters utilize a stainless steel perforated basket with wire cloth lining and no bag.

1. Remove filter bag by grasping loop and pulling toward the center of the bag and upward.
2. Lift the filter bag out of the support basket and discard.
3. Remove the support basket from the filter to clean and inspect for damage. *
4. Clean and inspect the filter interior. It is especially important to clean and inspect the basket seating area and the bag sealing surface. Clean and inspect o-ring and o-ring groove. *
5. Reinstall the support basket into the opening, making sure it is seated firmly on the support ring.
6. Install a new filter bag. If "C" bags with Flex bands (-F) are used, install by forming the band into a "kidney bean" shape and then allow the band to snap into place on the bag sealing surface (fig 2).

D. Media Replacement Interval

1. Check the specific cartridge or bag data sheets for maximum allowable differential pressure.
2. Media should be changed at or below that pressure, or damage to the media could occur resulting in compromised filtration efficiency.
3. In general, this maximum pressure is temperature dependent.

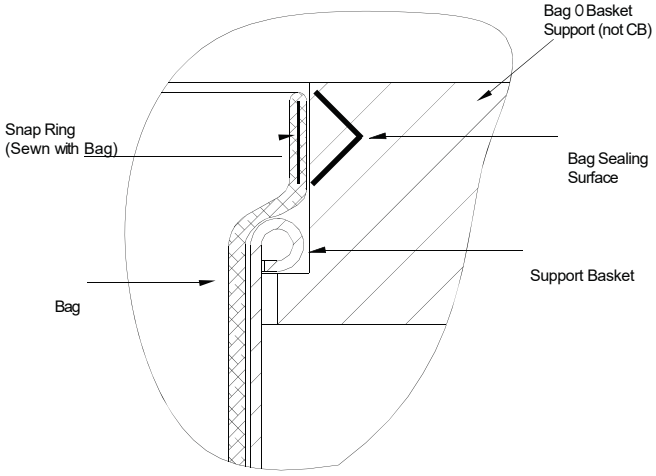

Figure 2

Illustration of Typical Bag Vessel Internal Components

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IV. Cover Replacement and Start-up Procedures (or initial assembly and start-up)

NOTE: Inlet, outlet, vent and drain connections are labeled on all Filters. Except for the reference to fluid flow and draining, installing filter media in a new filter is essentially the same as for a filter in service.

1. Clean and inspect gasket seating surfaces. Re-lubricate gasket liberally with a lubricant suitable for the application.
2. Swing bolts and nuts should be cleaned, inspected and lubricated. *
3. Position cover over filter body and align the notches or brackets on the cover with the swing bolts while lowering the cover into place. A mechanical cover lift with hand wheel or a hydraulic cover lift may be provided, depending upon the model & options ordered. After cover contacts the compression springs, release all hydraulic jack pressure or completely back off the handwheel.
4. Position swing bolts to cover. Some units will have either three or four longer swing bolts which should be engaged first to aid in closing the cover against the force of the cartridge top seat springs.

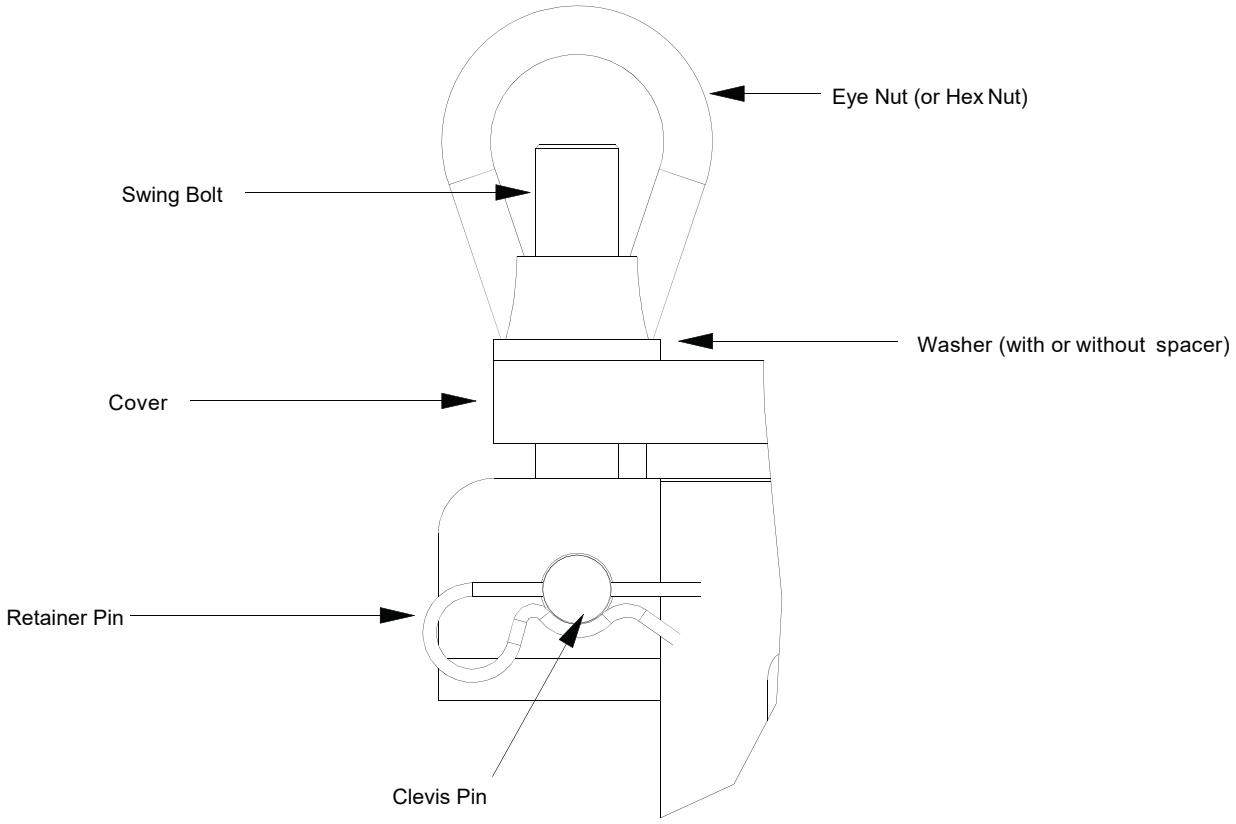
   After the springs have been compressed, position the short swing bolts to the cover. Loosen the eye nuts on the long bolts and reposition the spacer from the shank of the bolt to directly under the eye nut. (Without the spacer, the eye nut will not have sufficient travel to be completely tightened.) If hex nuts are used, spacers are not required.
5. Tighten the nuts in an alternate crisscross pattern. Do not apply excessive torque to the nuts as permanent distortion and or damage to the filter may result.

Maximum Torque Ft-Lb

	Carbon Steel	Stainless
5/8" Bolt	50	30
3/4" Bolt	80	50
1" Bolt	200	125
1/2" Bolt	30	20

Use of appropriate lubricant on threads is required.

6. Close drains and open vent plug.
7. Open inlet valve partially and allow vessel to fill slowly.
8. When air is expelled from the vessel and liquid begins to bleed from the vent, close the vent plug.
8. Open inlet & outlet valves fully. Check for leaks.



WARNINNG

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