

# Element Change Instructions



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## Element Change Instructions for 2K9 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap. If a bleed valve is present rather than a bleed plug, push the button on the valve to bleed the filter. Be sure system pressure is below 750 psi.
- Drain the filter housing by removing the drain plug.
- Use 1 ½" socket wrench (open end or crescent wrench) to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 20 ft-lbs.)
- Remove contaminated element from filter. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and replace if necessary. (Part number O-ring is LFT-908).
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then 1 ½" socket wrench (open end or crescent wrench) and tighten until cap bottoms out on filter tube and torque to 20 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug or (by pressing auto bleed adaptor) to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

## Element Change Instructions for 3K9 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap. If a bleed valve is present rather than a bleed plug, push the button on the valve to bleed the filter. Be sure system pressure is below 750 psi.
- Drain the filter housing by removing the drain plug.
- Use 1 ½" socket wrench (open end or crescent wrench) to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 20 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number O-ring is LFT-908).
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then 1 ½" socket wrench (open end or crescent wrench) and tighten until cap bottoms out on filter tube and torque to 20 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug or (by pressing auto bleed adaptor) to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

## Element Change Instructions for 3QF5 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap. If a bleed valve is present rather than a bleed plug, push the button on the valve to bleed the filter. Be sure system pressure is below 750 psi.
- Drain the filter housing by removing the drain plug.
- Use open end wrench to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 20 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LF-7363, Viton is LF-7363V, EPR is LF-7363B.)
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then open end wrench and tighten until cap bottoms out on filter tube and torque to 20 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.
- Repeat steps 2-11 for each housing prior to turning system on again.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug or (by pressing auto bleed adaptor) to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

# Element Change Instructions for BFT Filter

## ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts from the cap by using a 5/8 " socket turning the bolts counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (BFT-211) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly, making sure the bypass is inserted in the element make sure the cap O-ring (BFT-211) is installed correctly. Tighten the bolts until the lock washers are compressed.

## INDICATOR INSTALLATION

- Remove the 1/8" Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.

## Element Change Instructions for CF40 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Discard the fluid from the bowl.
- Inspect the O-ring (DF-6) and backup (DF-7-1) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for CF60 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Discard the fluid from the bowl.
- Inspect the O-ring (LF-3837) and backup (LF-5465) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for CTF60 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 1-5/16" socket and turning the bowl counter clockwise.
- Discard the fluid in the bowl.
- Inspect the O-ring (00613039) and backup ring (00413735) on the bowl for damage. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and on the bowl.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.



## Element Change Instructions for CFX30 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Discard the fluid from the bowl.
- Inspect the O-ring (DF-6) and backup (DF-7-1) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for DF40 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Discard the fluid from the bowl.
- Inspect the O-ring (DF-6) and backup (DF-7-1) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for FOF60-03 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Discard the fluid from the bowl.
- Inspect the O-ring (LF-4536) and backup (LF-4537) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for IRF Filter

### ELEMENT INSTALLATION

- Shut down system and allow for cooling prior to servicing.
- Remove the four bolts from the cap by using a ½" socket turning the bolts counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (LFT-908) between the cap and porting head for any damage.
- Remove the old Element slowly, permitting the oil in the element to drain.
- Keep the spring plate (LF-582A) and the spring (LF-3236) for reinstallation on the replacement element.
- Lubricate the O-ring opposite the labeling on the element.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element. Then install the spring plate (LF-582A) and the spring (LF-3236) making sure the spring stays attached to the plate.
- Insert the element into the bowl.
- Install the cap assembly, making sure the bypass is inserted in the element. Also make sure the pin on the cap inserts into the proper location on the head. Make sure the cap O-ring (LFT-908) is installed correctly. Tighten the bolts in a star pattern until the lock washers are compressed.

### INDICATOR INSTALLATION

- Remove the 1/8" Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.

## Element Change Instructions for K9 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap. If a bleed valve is present rather than a bleed plug, push the button on the valve to bleed the filter. Be sure system pressure is below 750 psi.
- Drain the filter housing by removing the drain plug.
- Use 1 ½" socket wrench (open end or crescent wrench) to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 20 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number O-ring is LFT-908).
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then 1 ½" socket wrench (open end or crescent wrench) and tighten until cap bottoms out on filter tube and torque to 20 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug or (by pressing auto bleed adaptor) to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

# Element Change Instructions for KF3 and WKF3 Filter

## ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts holding the element bowl to the porting head by using a 9/16" socket and turning the bolts counter clockwise.
- Remove the bowl and the element from the porting head and discard the fluid from the bowl.
- Check the O-ring (LF-142) between the Bowl and the porting head for any damage. Replace if necessary (for part numbers concerning Viton® seals, contact the factory).
- Select the correct element(s) lubricate the O-rings on the element and the bowl, install element connector between elements if using more than one element, install the spring plate and spring on the bowl end of the element.
- Install the element bowl and tighten the bolts in the following pattern: Bottom right bolt, top left bolt, top right bolt, bottom left bolt. Be sure not to over tighten the bolts. Inspect the filter bowl and head to insure that the bolts were evenly tightened.

## INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting head near the inlet port. Using a 7/8" socket, turn the plug counter clockwise to remove it.
- Select the correct cartridge indicator (visual or electrical) install the indicator in the hole where you removed the plug. Tighten the indicator until it bottoms out the torque to 40 ft/lbs.

# Element Change Instructions for KC50 and WKC50 Filter

## ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap.
- Drain the filter housing by removing the drain plug.
- Use 7/8" or 1-1/4" socket wrench (open end or crescent wrench), depending on filter series, to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 100 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LFT-105; part number for back-up ring is LF-2112). Location of O-ring/back-up ring is important if replaced: back-up ring is installed in cap closest to cap threads (for part numbers concerning Viton® seals, contact the factory).
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then use 7/8" or 1-1/4" socket wrench (open end or crescent wrench) and tighten until cap bottoms out on filter tube and torque to 100 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug to remove entrapped air. This insures that the filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

## Element Change Instructions for KC65 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap.
- Drain the filter housing by removing the drain plug.
- Use 7/8" or 1-1/4" socket wrench (open end or crescent wrench), depending on filter series, to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 100 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LFT-105; part number for back-up ring is LF-2112). Location of O-ring/back-up ring is important if replaced: back-up ring is installed in cap closest to cap threads.
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then use 7/8" or 1-1/4" socket wrench (open end or crescent wrench) and tighten until cap bottoms out on filter tube and torque to 100 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**



# Element Change Instructions for KF3, SKF3, and WKF3 Filter

## ELEMENT INSTALLATION

- Turn off the system and let depressurize as well as cool to a working comfortable working temperature.
- Remove the four bolts holding the element bowl to the porting head by using a 9/16" socket and turning the bolts counter clockwise.
- Check the "O"ring between the Bowl and the porting head for any nicks or damage. Replace if necessary. For part numbers contact factory.
- Select the correct element(s) lubricate the "O"rings on the element and the bowl, install element connector between elements if using more than one element, install the spring plate and spring on the bowl end of the element.
- Install the element bowl and tighten the bolts in the following pattern: Bottom right bolt, top left bolt, top right bolt, bottom left bolt. Be sure not to over tighten the bolts. Inspect the filter bowl and head to insure that the bolts were evenly tightened. If you have replaced the bowl "o"-ring with a new one then the bolts should be torqued to 45 ft./lbs. If you re-use the old "o"-ring the bolts should be torqued to 30 ft./lbs.

## Indicator installation

- Remove the indicator plug located on the top of the porting head near the inlet port. Using a 7/8" socket, turn the plug counter clockwise to remove it.
- Select the correct cartridge indicator (visual or electrical) install the indicator in the hole where you removed the plug. Tighten the indicator until it bottoms out the torque to 40 ft/lbs.

# Element Change Instructions for KF3SKB Filter

## ELEMENT INSTALLATION

- Turn off the system and let depressurize as well as cool to a working comfortable working temperature.
- Remove the four bolts holding the element bowl to the porting head by using a 9/16" socket and turning the bolts counter clockwise.
- Check the "O"ring between the Bowl and the porting head for any nicks or damage. Replace if necessary.
- Remove the magnetic separator form the cap by loosening the lock nut and turning the tie rod clockwise.
- Remove the lock nut retaining the name plate end cap and outer screen.
- Next remove the end cap and outer screen leaving the magnets assembled to the port casting.
- Dip the assembly into a cleaning fluid and blow contaminant off with an air gun.
- If the previous method is unsatisfactory or an air gun is unavailable proceed as follows:
  - Remove name plate backing nut and magnet retaining nut.
  - Remove brass end spacer, magnets and center spacers from tie rod.
  - Remove contamination from magnet by sliding the particles on magnets into "clumps" and remove by hand or rag.
- When magnets are clean reverse above procedure for reassembly. Use the polarity of the magnets to facilitate assembly.
- Install the element bowl and tighten the bolts in the following pattern: Bottom right bolt, top left bolt, top right bolt, bottom left bolt. Be sure not to over tighten the bolts. Inspect the filter bowl and head to insure that the bolts were evenly tightened. If you have replaced the bowl "o"-ring with a new one then the bolts should be torqued to 45 ft./lbs. If you re-use the old "o"-ring the bolts should be torqued to 30 ft./lbs.

# Element Change Instructions for KF8 and WKF8 Filter

## ELEMENT INSTALLATION

- Shut system down to assure there is no pressure in the filter housing.
- Remove the four bolts holding the element bowl to the porting head using a 3/4" socket and turning the bolts counter-clockwise.
- Remove the filter bowl from the porting head.
- Discard the oil left in the bowl.
- Remove the contaminated element/s from the filter bowl. Please note that the spring plate and spring must be reused. For filters with two elements the element connector must be reused.
- Inspect the O-ring (LF-3160) between the bowl and porting head for any damage, replace if necessary (for part numbers concerning Viton® seals, contact the factory).
- Select the correct replacement element/s, lubricate the element seals, and install element connector between elements if using more than one element. Install the spring plate and spring on the bowl end of the element.
- Install the element bowl and tighten the bolts in a star pattern starting on top right, then bottom left, the bottom right and top left, be sure not to over tighten the bolts. Inspect the filter bowl and head to insure that the bolts were evenly tightened.

# Element Change Instructions for KF30, KF50 & WKF30 Filter

## ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap.
- Drain the filter housing by removing the drain plug.
- Use 7/8" or 1-1/4" socket wrench (open end or crescent wrench), depending on filter series, to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 100 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LFT-105; part number for back-up ring is LF-2112.) Location of O-ring/back-up ring is important if replaced: back-up ring is installed in cap closest to cap threads (for part numbers concerning Viton® seals, contact the factory).
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then use 7/8" or 1-1/4" socket wrench (open end or crescent wrench) and tighten until cap bottoms out on filter tube and torque to 100 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.
- This same procedure can be used for the non-bypassing filter models (KFN30 and KFN50).

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

## Element Change Instructions for KFH50 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap.
- Drain the filter housing by removing the drain plug.
- Use 7/8" or 1-1/4" socket wrench (open end or crescent wrench), depending on filter series, to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 100 ft-lbs.)
- Remove contaminated element with a twist-~~ing~~ motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LFT-105; part number for back-up ring is LF-2112). Location of O-ring/back-up ring is important if replaced: back-up ring is installed in cap closest to cap threads.
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then use 7/8" or 1-1/4" socket wrench (open end or crescent wrench) and tighten until cap bottoms out on filter tube and torque to 100 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

## Element Change Instructions for KFT Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts from the cap by using a ½” socket turning the bolts counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (LFT-908) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly, making sure the bypass is inserted in the element make sure the cap O-ring (LFT-908) is installed correctly. Tighten the bolts until the lock washers are compressed.

### INDICATOR INSTALLATION

- Remove the 1/8” Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.

## Element Change Instructions for KL3 Filter

### ELEMENT INSTALLATION

- Turn off the system and let depressurize as well as cool to a working comfortable working temperature.
- Remove the bowl from the head by using a strap wrench and turning the bowl counter clockwise.
- Check the “O” ring (LFT-295) between the Bowl and the porting head for any nicks or damage. Replace if necessary.
- Remove the element from the bowl; make sure to keep the spring (LF-3236) and the spring plate (LF-582A-1) from the bottom of the element.
- Discard the oil in the bowl as well as the dirty element.
- Select the correct replacement element and lubricate both “O” ring seals of the element.
- Snap the spring plate (LF-582A-1) into the unmarked end of the element then place the spring in the spring plate.
- Place the labeled end of the element on the bushing of the filter head.
- Install the element bowl into the head using a strap wrench, make sure to torque the bowl to 40 ft-lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting head near the inlet port. Using a 7/8” socket, turn the plug counter clockwise to remove it.
- Select the correct cartridge indicator (visual or electrical) install the indicator in the hole where you removed the plug. Tighten the indicator until it bottoms out the torque to 40 ft/lbs.

## Element Change Instructions for KTK Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts from the cap by using a ½" socket turning the bolts counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (LFT-908) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly, making sure the bypass is inserted in the element make sure the cap O-ring (LFT-908) is installed correctly. Tighten the bolts until the lock washers are compressed.

### INDICATOR INSTALLATION

- Remove the 1/8" Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.



## Element Change Instructions for LF1 and WLF1 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure in the filter housing.
- Remove the four bolts holding the element bowl to the porting head using a 3/4" socket and turning the bolts counter-clockwise.
- Remove the filter bowl from the porting head.
- Discard the oil left in the bowl.
- Remove the contaminated element/s from the filter bowl. Please note that the spring plate and spring must be reused. For filters with two elements the element connector must be reused.
- Inspect the O-ring (LF-3160) between the bowl and porting head for any damage, replace if necessary (for part numbers concerning Viton® seals, contact the factory).
- Select the correct replacement element/s, lubricate the element seals, and install element connector between elements if using more than one element. Install the spring plate and spring on the bowl end of the element.
- Install the element bowl and tighten the bolts in a star pattern starting on top right, then bottom left, the bottom right and top left, be sure not to over tighten the bolts. Inspect the filter bowl and head to insure that the bolts were evenly tightened.

## Element Change Instructions for LRT Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts from the cap by using a ½” socket turning the bolts counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (LFT-908) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly, making sure the bypass is inserted in the element make sure the cap O-ring (LFT-908) is installed correctly. Tighten the bolts until the lock washers are compressed.

### INDICATOR INSTALLATION

- Remove the 1/8” Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.

## Element Change Instructions for LTK Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts from the cap by using a ½” socket turning the bolts counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (LFT-908) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly, making sure the bypass is inserted in the element make sure the cap O-ring (LFT-908) is installed correctly. Tighten the bolts until the lock washers are compressed.

### INDICATOR INSTALLATION

- Remove the 1/8” Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.

## Element Change Instructions for MAF1 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the element by turning the bowl counter clockwise with hands.
- Discard the old element.
- Select the element you want to install. Lubricate the O-ring on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for MF2 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the element by turning the bowl counter clockwise with hands.
- Discard the old element.
- Select the element you want to install. Lubricate the O-ring on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for MKF50 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap.
- Drain the filter housing by removing the drain plug.
- Use 7/8" or 1-1/4" socket wrench (open end or crescent wrench), depending on filter series, to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 100 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LFT-105; part number for back-up ring is LF-2112). Location of O-ring/back-up ring is important if replaced: back-up ring is installed in cap closest to cap threads.
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then use 7/8" or 1-1/4" socket wrench (open end or crescent wrench) and tighten until cap bottoms out on filter tube and torque to 100 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.
- Follow these steps for both filter housings.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

## Element Change Instructions for MLF1 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure in the filter housing.
- Remove the four bolts holding the element bowl to the porting head using a 3/4" socket and turning the bolts counter-clockwise.
- Remove the filter bowl from the porting head.
- Discard the oil left in the bowl.
- Remove the contaminated element/s from the filter bowl. Please note that the spring plate and spring must be reused. For filters with two elements the element connector must be reused.
- Inspect the O-ring (LF-3160) between the bowl and porting head for any damage, replace if necessary.
- Select the correct replacement element/s, lubricate the element seals, and install element connector between elements if using more than one element. Install the spring plate and spring on the bowl end of the element.
- Install the element bowl and tighten the bolts in a star pattern starting on top right, then bottom left, then the bottom right and top left, be sure not to over tighten the bolts. Inspect the filter bowl and head to insure that the bolts were evenly tightened.

## Element Change Instructions for NF30 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 7/8" socket and turning the bowl counter clockwise.
- Discard the fluid in the bowl.
- Inspect the O-ring (NF-109) and backup ring (NF-110) on the bowl for damage. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and on the bowl.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.



## Element Change Instructions for NFS30 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 7/8" socket and turning the bowl counter clockwise.
- Discard the fluid in the bowl.
- Inspect the O-ring (NF-109) and backup ring (NF-110) on the bowl for damage. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and on the bowl.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for NOF30-05 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Discard the fluid from the bowl.
- Inspect the O-ring (NF-109) and backup (NF-110) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for NOF30-760 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Discard the fluid from the bowl.
- Inspect the O-ring (NF-109) and backup (NF-110) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for PAF1 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the element by turning the bowl counter clockwise with hands.
- Discard the old element.
- Select the element you want to install. Lubricate the O-ring on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for PF40 Filter

### ELEMENT INSTALLATION

- Turn the system off and allow the time for the fluid to cool to a safe working temperature.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Discard the fluid from the bowl.
- Inspect the O-ring (DF-6) and backup (DF-7-1) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for QF5 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap.
- Drain the filter housing by removing the drain plug.
- Use open end wrench to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 20 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LF-7363, Viton is LF-7363V, EPR is LF-7363B.)
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then open end wrench and tighten until cap bottoms out on filter tube and torque to 20 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

## Element Change Instructions for QF15 and WQF15 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap. If a bleed valve is present rather than a bleed plug, push the button on the valve to bleed the filter. Be sure system pressure is below 750 psi.
- Drain the filter housing by removing the drain plug.
- Use open end wrench to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 20 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LF-7162, Viton is LF-7162V, EPR is LF-7162B; part number for back-up O-ring is LF-7162, Viton is LF-7162V, EPR is LF-7162B). Location of O-ring/back-up ring is important if replaced: back-up ring is installed in cap closest to cap threads.
- Lube element seals before placing replacement element into housing with fluid from the system
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then open end wrench and tighten until cap bottoms out on filter tube and torque to 20 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug or (by pressing auto bleed adaptor) to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

## Element Change Instructions for QFD5 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap.
- Drain the filter housing by removing the drain plug.
- Use open end wrench to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 20 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LF-7162, Viton is LF-7162V; part number for back-up O-ring is LF-7162, Viton is LF-7162V). Location of O-ring/back-up ring is important if replaced: back-up ring is installed in cap closest to cap threads
- Lube element seals before placing replacement element into housing with fluid from the system..
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then open end wrench and tighten until cap bottoms out on filter tube and torque to 20 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**



## Element Change Instructions for QLF15 and WQLF15 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap. If a bleed valve is present rather than a bleed plug, push the button on the valve to bleed the filter. Be sure system pressure is below 750 psi.
- Drain the filter housing by removing the drain plug.
- Use open end wrench to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 20 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LF-7162, Viton is LF-7162V, EPR is LF-7162B; part number for back-up O-ring is LF-7162, Viton is LF-7162V, EPR is LF-7162B). Location of O-ring/back-up ring is important if replaced: back-up ring is installed in cap closest to cap threads.
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then open end wrench and tighten until cap bottoms out on filter tube and torque to 20 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug or (by pressing auto bleed adaptor) to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

## Element Change Instructions for QT Filter

### ELEMENT INSTALLATION

- Turn off system to reduce pressure.
- Bleed pressure by opening the bleed plug.
- Remove the cap by using an open adjustable wrench turning the cap counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (BUNA = LFT-7364; Viton = LFT-7364V; EPR = LFT-7364B) and the back-up O-ring (BUNA = LF-6173; Viton = LF 6173V; EPR = LF-6173B) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly, making sure the bypass is inserted in the element make sure the cap O-ring (BUNA = LFT-7364; Viton = LFT-7364V; EPR = LFT-7364B) and the back-up O-ring (BUNA = LF-6173; Viton = LF 6173V; EPR = LF-6173B) are installed correctly. Tighten the cap to a torque of 20 ft lbs.

### INDICATOR INSTALLATION

- Remove the 1/8" Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.

## Element Change Instructions for RF60 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove drain plug (A-LF-1744) by turning counter clock wise. This will allow the fluid to vacate the bowl.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Inspect the O-ring (DF-681) and backup (DF-779) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for RFS50 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove drain plug (A-LF-1744) by turning counter clock wise. This will allow the fluid to vacate the bowl.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Inspect the O-ring (DF-681) and backup (DF-779) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for RLT and WRLT Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 1 5/16" socket and turning the bowl counter clockwise.
- Discard the fluid in the bowl.
- Inspect the O-ring (LF-340) on the bowl for damage. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and on the bowl.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 1 5/16" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for RT Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts from the cap by using a ½" socket turning the bolts counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (LFT-908) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly, making sure the bypass is inserted in the element make sure the cap O-ring (LFT-908) is installed correctly. Tighten the bolts until the lock washers are compressed.

### INDICATOR INSTALLATION

- Remove the 1/8" Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.

## Element Change Instructions for RTI Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts from the cap by using a ½" socket turning the bolts counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (LFT-908) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly, making sure the bypass is inserted in the element make sure the cap O-ring (LFT-908) is installed correctly. Tighten the bolts until the lock washers are compressed.

### INDICATOR INSTALLATION

- Remove the 1/8" Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.

## Element Change Instructions for SKB Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts from the cap by using a ½" socket turning the bolts counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (LFT-908) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly, making sure the bypass is inserted in the element make sure the cap O-ring (LFT-908) is installed correctly. Tighten the bolts until the lock washers are compressed.

### INDICATOR INSTALLATION

- Remove the 1/8" Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.



## Element Change Instructions for SRLT Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 7/8" socket and turning the bowl counter clockwise.
- Discard the fluid in the bowl.
- Inspect the O-ring (original, series A & B: LF-143; Series C, D & E: TF1438) on the bowl for damage. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and on the bowl.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for SSQLF15 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap. If a bleed valve is present rather than a bleed plug, push the button on the valve to bleed the filter. Be sure system pressure is below 750 psi.
- Drain the filter housing by removing the drain plug.
- Use open end wrench to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 20 ft-lbs.)
- Remove contaminated element with a twisting motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is LF-7162, Viton is LF-7162V, EPR is LF-7162B; part number for back-up O-ring is LF-7162, Viton is LF-7162V, EPR is LF-7162B). Location of O-ring/back-up ring is important if replaced: back-up ring is installed in cap closest to cap threads.
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then open end wrench and tighten until cap bottoms out on filter tube and torque to 20 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug or (by pressing auto bleed adaptor) to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

# Element Change Instructions for ST Filter

## ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts from the cap by using a ½" socket turning the bolts counter clockwise.
- Remove the cap and inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (LFT-908) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly, making sure the bypass is inserted in the element make sure the cap O-ring (LFT-908) is installed correctly. Tighten the bolts until the lock washers are compressed.

## INDICATOR INSTALLATION

- Remove the 1/8" Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.

## ELEMENT CLEANING INSTRUCTIONS (SKB)

- Remove cap as described above leave the magnets assembled to the port casting.
- Dip the assembly into a cleaning fluid and then blow contamination of with an air gun.
- If above does not work, or air gun is unavailable, proceed as follows:
  - Remove magnet retaining nut.
  - Remove brass spacer, magnets and center spacers from tie rod.
  - Slide the particles into clumps and remove by hand or with a rag.
  - When magnets are clean reverse the above instructions for reassembly. Install magnets using their polarity (attraction) to facilitate reassembly.

## Element Change Instructions for TF1 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure in the filter housing.
- Remove the four bolts holding the element bowl to the porting head using a 9/16" socket and turning the bolts counter-clockwise.
- Remove the filter bowl from the porting head.
- Discard the oil left in the bowl.
- Remove the contaminated element/s from the filter bowl. Please note that the spring plate and spring must be reused. For filters with two elements the element connector must be reused.
- Inspect the O-ring (Buna N LFT-340; Viton® LFT-340V) between the bowl and porting head for any damage, replace if necessary.
- Select the correct replacement element/s, lubricate the element seals, and install element connector between elements if using more than one element. Install the spring plate and spring on the bowl end of the element.
- Install the element bowl and tighten the bolts in a star pattern starting on top right, then bottom left, the bottom right and top left, be sure not to over tighten the bolts. Inspect the filter bowl and head to insure that the bolts were evenly tightened.

## Element Change Instructions for TF50 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Bleed pressure from filter using bleed plug in filter cap.
- Drain the filter housing by removing the drain plug.
- Use 7/8" or 1-1/4" socket wrench (open end or crescent wrench), depending on filter series, to loosen threaded cap from filter tube. Rotate cap in counter-clockwise direction until it comes free of the filter tube. (Note: Cap is torqued to 100 ft-lbs.)
- Remove contaminated element with a twist-~~ing~~ motion from filter head. Please note that spring plate and spring are reusable.
- Inspect cap O-ring seal and back-up ring, and replace if necessary. (Part number for Buna N O-ring is TF-18PC; part number for back-up ring is TF-203). Location of O-ring/back-up ring is important if replaced: back-up ring is installed in cap closest to cap threads.
- Lube element seals before placing replacement element into housing with fluid from the system.
- Replace element spring plate and spring in top of element.
- Carefully replace cap over the newly installed element and seat on filter tube.
- Thread cap in clockwise manner until hand tight. Then use 7/8" or 1-1/4" socket wrench (open end or crescent wrench) and tighten until cap bottoms out on filter tube and torque to 45 ft-lbs.
- Tighten drain plug.
- Tighten bleed plug in cap.

**Reminder: When restarting the system it is critical to bleed filter housing by slightly loosening bleed plug to remove entrapped air. This insures that they filter housing is completely full with system fluid and the entire surface of the element is removing contamination.**

## Element Change Instructions for VF60 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 1 ¼" socket and turning the bowl counter clockwise.
- Discard the fluid from the bowl.
- Inspect the O-ring (LF-3837) and backup (LF-5465) ring in the porting head for nicks. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and inside the porting head.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for YF30 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter bowl by using a 7/8" socket and turning the bowl counter clockwise.
- Discard the fluid in the bowl.
- Inspect the O-ring (NF-109) and backup ring (NF-110) on the bowl for damage. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and on the bowl.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 45ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 7/8" socket.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for ZT Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the four bolts from the cap by using a 3/8" socket turning the bolts counter clockwise.
- Inspect the O-ring (LF-3814) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet the bottom end of the element.
- Install the cap assembly; make sure the cap O-ring (LF-3814) is installed correctly. Tighten the bolts until the lock washers are compressed.

### INDICATOR INSTALLATION

- Remove the 1/8" Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, either electrical or visual install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.



## Element Change Instructions for MRT Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the threaded cap by using a 1-1/2" socket and turning the cap counter-clockwise.
- Inspect the bypass valve (attached to the cap) for any damage. Also inspect the O-ring (LFT-908) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom end of the element.
- Install the cap assembly; making sure the bypass is inserted in the element. Make sure the cap O-ring (LFT-908) is installed correctly. Use an adjustable torque wrench set at 45 ft-lbs with a 1-1/2" socket to secure the cap to the head.

### INDICATOR INSTALLATION

- Remove the visual indicator plus located on the left side of the filter head when facing the inlet port, by turning counter-clockwise.
- Select the correct indicator, either electrical or visual, install pipe sealant on the threads of the indicator and tighten turning the indicator clockwise until snug. Be careful not to over tighten, thread damage could occur.

## Element Change Instructions for RLD Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Establish which filter side is in operation – look at pictogram on the filter.
- Pull the lever away from filter to equalize the pressure internally and turn the lever through 90° – the other filter side is now in operation.
- Open oil drain plug on the filter side no longer operating. (Warning: Make sure the off-line housing is depressurized!) Collect fluid in a suitable container and clean or dispose of it in accordance with environmental regulations.
- Unscrew bowl on the filter side which is to be cleaned using a 27 mm wrench.
- Remove filter element from element location spigot in the filter head (examine surface of element for dirt residue and larger particles – these can indicate damage to the components).
- Replace (or clean – if using reusable metal mesh) filter element.
- Clean bowl and head, paying particular attention to the screw threads.
- Examine filter, especially sealing surfaces, for damage.
- Check O-rings and replace parts as necessary.
- Lubricate sealing surfaces on the filter head and bowl with clean operating fluid. Apply anti-seize compound to bowl elements.
- Place filter element carefully onto the element location spigot in the filter head.
- Screw in bowl fully then unscrew by one quarter-turn.
- Screw in oil drain plug.
- Open vent plug on the filter side not in use – look at pictogram on the filter.
- Pull the lever away from the filter to fill the empty housing. Caution: Do not rotate the handle.
- Release handle when fluid appears at vent plug.
- Tighten vent plug.
- Lift handle, do not rotate, and check for leaks.

## Element Change Instructions for RLD Filter

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 27 mm wrench.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 24 ft/lbs.

# Element Change Instructions for PLD Filter

## ELEMENT INSTALLATION

- Do not switch off the hydraulic system.
- Establish which filter side is in operation – look at pictogram on the filter.
- Pull the lever away from filter to equalize the pressure internally and turn the lever through 90° – the other filter side is now in operation.
- Open the vent screw located at the top of the housing on the filter side no longer in operation. (Warning: Make sure the off-line housing is depressurized!)
- Remove Drain Plug and collect fluid in a suitable container and clean or dispose of it in accordance with environmental regulations.
- Unscrew bowl on the filter side which is to be cleaned using a 36 mm wrench.
- Remove filter element from element location spigot in the filter head (examine surface of element for dirt residue and larger particles – these can indicate damage to the components).
- Replace filter element.
- Clean bowl and head, paying particular attention to the screw threads.
- Examine filter, especially sealing surfaces, for damage.
- Check O-rings and replace parts as necessary.
- Lubricate sealing surfaces on the filter head and bowl with clean operating fluid.
- Place filter element carefully onto the element location spigot in the filter head.
- Screw in bowl fully then unscrew by one quarter-turn.
- Screw in oil drain plug.
- Switch on hydraulic system and vent filter at an appropriate point in the system.
- Check filter for leakage.

## INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise using a 27 mm wrench.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 24 ft/lbs.

## Element Change Instructions for HS60 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Drain fluid into a suitable container and dispose of properly.
- Remove the filter bowl.
- Inspect the O-ring (00601579) and backup ring (00413736) on the bowl for damage. Replace if necessary.
- Select the element you want to install. Lubricate the O-rings on the element and on the bowl.
- Install the element onto the guide tube in filter porting head.
- Insert the element bowl and tighten until the bowl bottoms out then torque to 100 ft/lbs.

### INDICATOR INSTALLATION

- Remove the indicator plug located on the top of the porting block by turning it counter clock wise.
- Select the correct cartridge indicator (visual or electrical) and tighten until it bottoms out then torque to 40 ft/lbs.

## Element Change Instructions for GRTB Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Thread off the cap with 1-1/2" socket wrench.
- Inspect the O-ring (LF-11043) between the cap and porting head for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom of the element. Then place element (open end first) inside the housing, seated on the bushing and followed by the spring.
- Install the O-ring (LF-6709) and screw on the cap to 25 ft-lbs.

### INDICATOR INSTALLATION

- Remove the 1/8" Indicator plug located on the left side of the filter head when facing the inlet port, by turning counter clockwise.
- Select the correct indicator, install pipe sealant on the threads of the indicator and tighten by turning the indicator clockwise until snug. Be careful not to over tighten, as thread damage could occur.

## Element Change Instructions for LC50 Filter

### ELEMENT INSTALLATION

- Shut system down to assure there is no pressure or flow in the filter housing.
- Remove the filter cap.
- Inspect the O-ring (LF-10968\_LC50) between the cap and filter body for any damage.
- Install the necessary element by lubing the O-ring or grommet on the bottom of the element. Then place element (open end first) inside the housing, seated on the bushing and followed by the spring.
- Install the O-ring (LF-10968\_LC50) and screw on the head.