

OPERATING & MAINTENANCE MANUAL



Long working life of the hydraulic components and correct use of the hydraulic systems can be assured only when maintenance is performed correctly and at regular intervals.

Filtration products will only be guaranteed if original MP Filtri replacements elements and spares are used.

In order to prevent the filter elements from collapsing due to excessive hydraulic pressure it is essential to use clogging & differential indicators that serve to inform the user of the need to change the cartridge.

Effective contamination control can be assured only by the correct use of clogging indicators.

INSTALLATION

- A:** Check that the pressure value of the selected filter is higher than the system's maximum operating pressure (the maximum pressure value is shown on the dataplate).
- B:** Check that the filter body contains the filter cartridge.
- C:** Check that the operating fluid is compatible with the material of the body, cartridge and seals.
- D:** Secure the filter using the relevant threaded holes, to rigid brackets.
Rigid installation makes it possible to unscrew the housing without introducing flexing of the hydraulic fittings, limiting any points of stress transfer.
- E:** Install the filter in an accessible position for correct and trouble-free maintenance and visibility.
- F:** Start the machine and check for absence of oil leak from the filter and relative fittings.
- G:** Repeat the visual inspection when the system arrives at the operating temperature of the oil.

MAINTENANCE

- A:** All maintenance operations must be performed only by suitably trained personnel.
- B:** The hydraulic system must be depressurised before performing maintenance operations (except for duplex filter).
- C:** Maintenance must be carried out using suitable tools and containers to collect the fluid contained in the filter body.
Spent fluids must be disposed of in compliance with statutory legislation.
- D:** Do not use naked flames during maintenance operations.
- E:** Use the utmost caution in relation to the temperature of the fluid. High temperature can lead to residual pressure with resulting undesirable movements of mechanical parts.

CHANGING THE FILTER ELEMENT

- A:** The data on which the filter elements are changed must be entered in the machine datasheet.
- B:** Spare parts installed must be in compliance with the specifications given in the machine operating and maintenance manual.
- C:** Filter bodies and tools must be thoroughly cleaned prior to each maintenance operation.
- D:** After having opened the filter to change the filter element, check the condition of the seals and renew them if necessary.
Clean thoroughly before reassembling.

**CHANGING THE FILTER ELEMENT IN
LMP 110 - 120 - 124
LMP 210 / 211 - LDP
LMP 400 - 401 FILTERS
Length 2 - 3 - 4**

1

Depressurise the system and clean the filter.

2

Unscrew (if present) the oil drain plug (item A) collecting the fluid in a suitable container.
When the operation is terminated screw the plug (item A) tightening it fully down and check the condition of the seal.
Unscrew housing using the appropriate tools and extract the filter element.

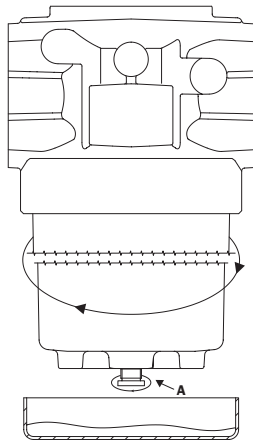


Fig. 1

3

Collect the spent oil and cartridge in a suitable container and dispose of them in compliance with statutory legislation.

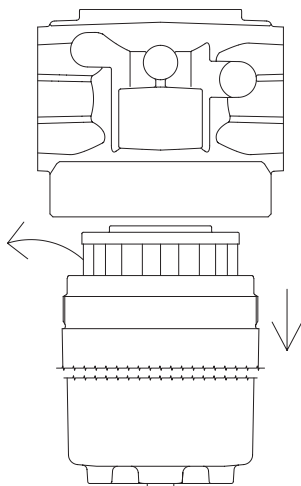


Fig. 2

!!! WARNING !!!

4

To avoid damaging the components clean seal (B), surfaces (A) and threads (C) of the housing and the head.

5

Check the condition of seals (B) if renewing, lubricate the new seals with the operating fluid before installing.

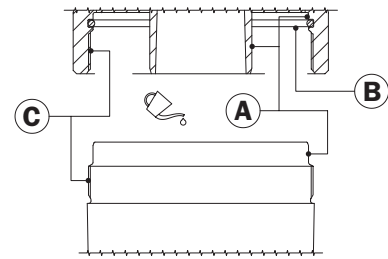


Fig. 3

6

Lubricate the filter element seal with the operating fluid.
Insert the filter element in the filter housing.
Insert the cartridge in the head spigot.

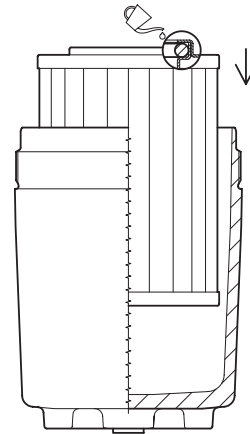


Fig. 4

7

Screw the cover into the housing using the correct tool.

WARNING:

Screw the filter bowl fully into the filter head
" DO NOT OVER - TIGHTEN "

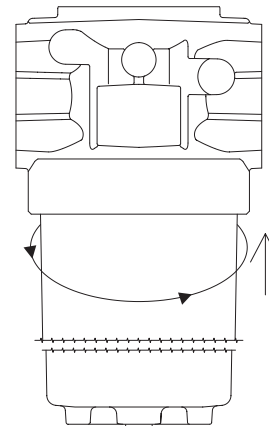


Fig. 5

8

Start the machine and check for the absence of leaks.
Repeat the check when the machine has reached its operating temperature.

CHANGING THE FILTER ELEMENT IN LMP 400 - 401 FILTERS Length 5 - 6

1

Depressurise the system and clean the filter.

2

Unscrew the oil drain plug (item A) collecting the fluid in a suitable container. When the operation is terminated screw the plug (item A) tightening it fully down and check the condition of the seal.
Unscrew housing using the appropriate tools and extract the filter element.

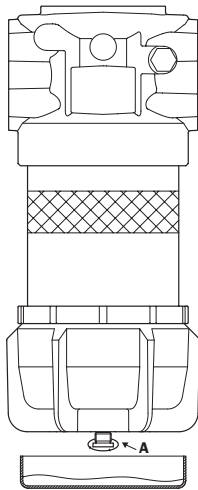


Fig. 1

3

Collect the spent oil and cartridge in a suitable container and dispose of them in compliance with statutory legislation.

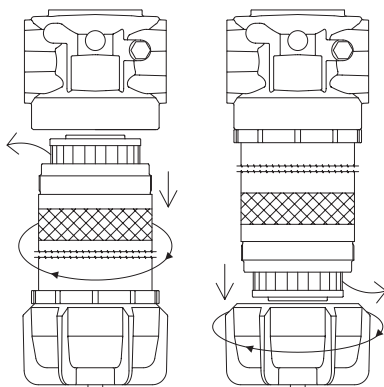


Fig. 2

!!! WARNING !!!

4

To avoid damaging the components clean the seals (B), the surfaces (A) and the threads (C) of the housing and the head or cover in version P01 and P02.

5

Check the condition of seals (B) - if renewing, lubricate the new seals with the operating fluid before installing.

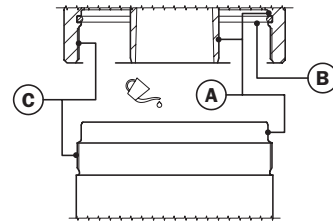


Fig. 3

6

Lubricate the filter element seal with the operating fluid. Fit the lower spigot in the filter element, and insert the element - spigot assembly as shown in fig. 4 respectively for versions P01 and P02.

Version P01

Version P02

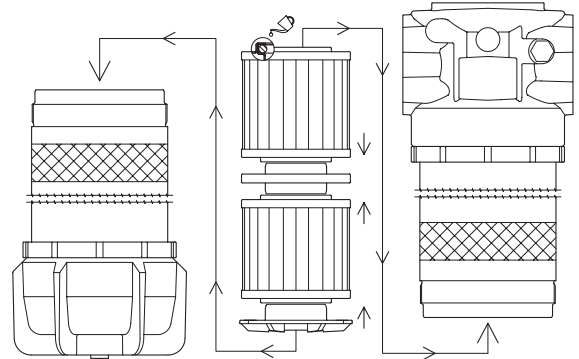


Fig. 4

7

Screw the cover into the housing using the correct tool.

WARNING:

Screw the filter bowl fully into the filter head
" DO NOT OVER - TIGHTEN "

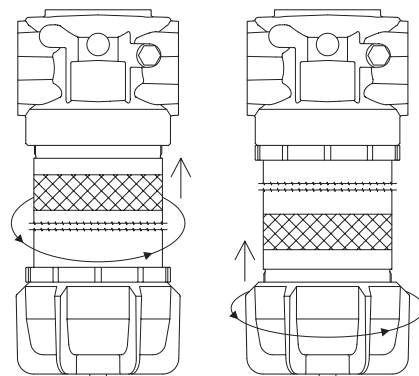


Fig. 5

8

Start the machine and check for the absence of leaks. Repeat the check when the machine has reached its operating temperature.

CHANGING THE FILTER ELEMENT IN LMP 430 - 431 FILTERS

1

Depressurise the system and clean the filter.

2

Unscrew the air breather plug (item A) and open the oil drain connection (item B) collecting the fluid in a suitable container. When the operation is terminated screw the plug (item A) tightening it fully down after having checked the condition of its seal. Close the oil drain connection (B).

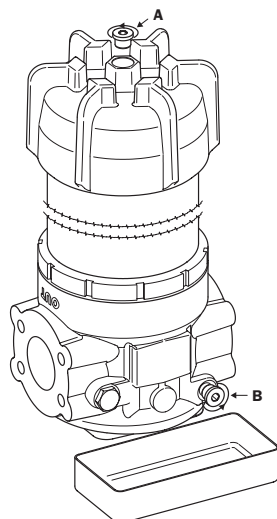


Fig. 1

3

Unscrew and remove the cover using the specific tools, extract the upper spigot, and extract the filter element.

4

Collect the spent oil and cartridge in a suitable container and dispose of them in compliance with statutory legislation.

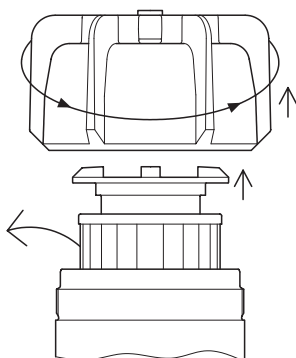


Fig. 2

!!! WARNING !!!

5

To avoid damaging the components clean the seal (B), surfaces (A) and threads (C) of the cover and the housing.

6

Check the condition of seals (B) if renewing, lubricate the new seals with the operating fluid before installing.

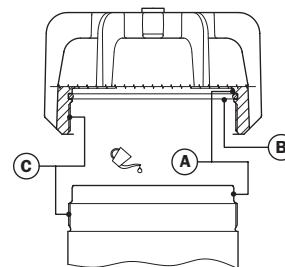


Fig. 3

7

Lubricate the filter element seal with the operating fluid. Insert the filter element in the filter body, fit the spigot at the top of the filter element as shown in fig. 4.

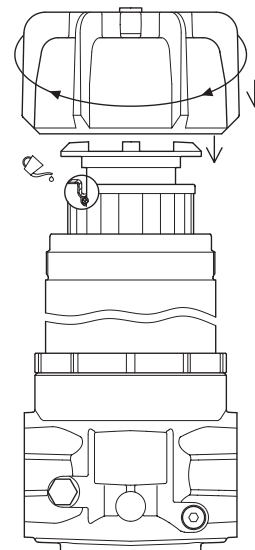


Fig. 4

8

Screw the cover into the housing using the correct tool.

WARNING:

Screw the filter bowl fully into the filter head
“ **DO NOT OVER - TIGHTEN** ”

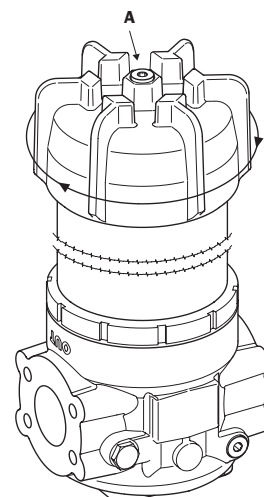


Fig. 5

9

Start the machine and bleed the air by unscrewing (max. one turn) the plug (item A). When the operation is terminated tighten the plug fully.

10

Start the machine and check for the absence of leaks. Repeat the check when the machine has reached its operating temperature.

CHANGING THE FILTER ELEMENT IN LMP 900 - 901 FILTERS Length 1

1

Depressurise the system and clean the filter.

2

Unscrew the air breather plug (item A) and open the
Unscrew the oil drain plug (item A) collecting the
fluid in a suitable container. When the operation is
terminated screw down the plug (item A) tightening
it fully down after having checked the condition of
its seal. Unscrew the housing using the appropriate
tools and extract the filter element.

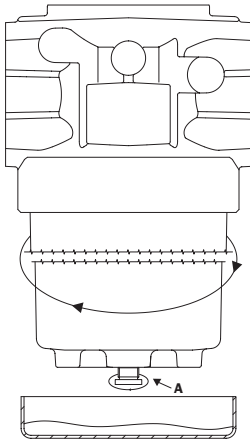


Fig. 1

3

Collect the spent oil and cartridge in a suitable
container and dispose of them in compliance with
statutory legislation.

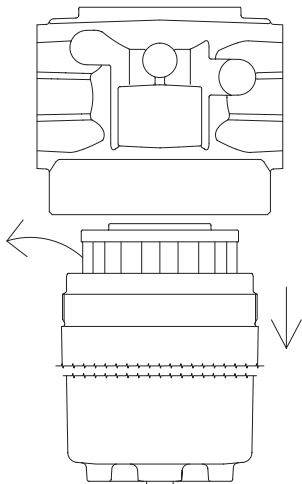


Fig. 2

!!! WARNING !!!

4

To avoid damaging the components clean seal (B),
surfaces (A) and threads (C) of the housing and the
head.

5

Check the condition of seals (B) if renewing,
lubricate the new seals with the operating fluid
before installing.

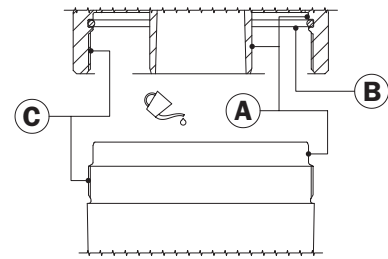


Fig. 3

6

Lubricate the filter element seals with the operating
fluid. Fit the lower spigot in the filter element, and
insert the element - spigot assembly + as shown in
fig. 4 into the housing.

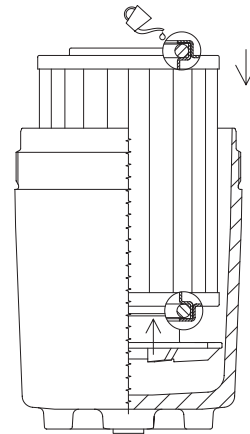


Fig. 4

7

Screw the cover into the housing using the correct tool.

WARNING:

Screw the filter bowl fully into the filter head
" DO NOT OVER - TIGHTEN "

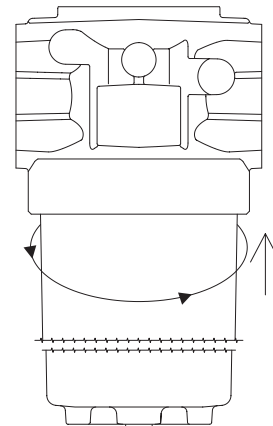


Fig. 5

8

Start the machine and check for the
absence of leaks.
Repeat the check when the machine has reached
its operating temperature.

CHANGING THE FILTER ELEMENT IN LMP 900 - 901 FILTERS Length 2

1

Depressurise the system and clean the filter.

2

Unscrew the air breather plug (item A) and open the oil drain connection (item B) collecting the fluid in a suitable container. When the operation is terminated screw the plug (item A) tightening it fully down after having checked the condition of its seal.

Close the oil drain connection (B).

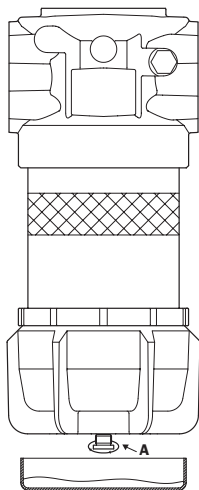


Fig. 1

3

Unscrew and remove the cover using the specific tools, extract the upper spigot, and extract the filter element.

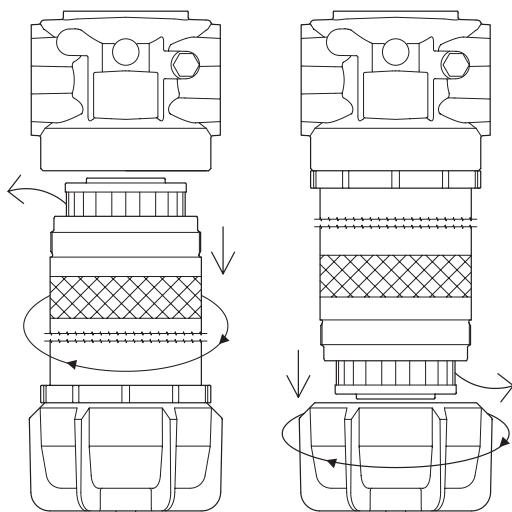


Fig. 2

!!! WARNING !!!

4

To avoid damaging the components clean the seal (B), surfaces (A) and threads (C) of the cover and the housing.

5

Check the condition of seals (B) if renewing, lubricate the new seals with the operating fluid before installing.

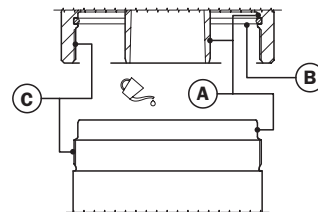


Fig. 3

6

Lubricate the filter element seal with the operating fluid. Insert the filter element in the filter body, fit the spigot at the top of the filter element as shown in fig. 4.

Version P01

Version P02

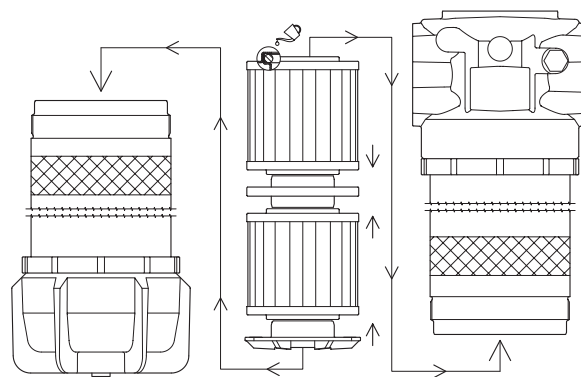


Fig. 4

7

Screw the cover into the housing using the correct tool

WARNING:

Screw the filter bowl fully into the filter head
“ **DO NOT OVER - TIGHTEN** ”.

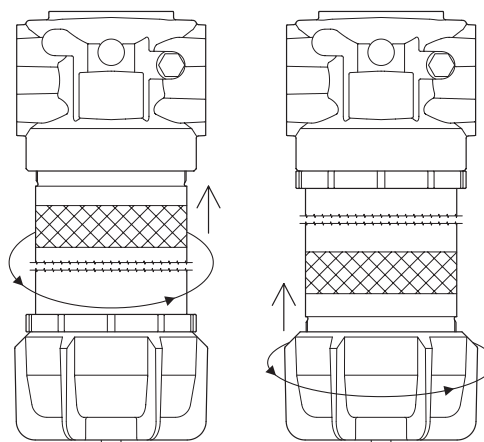


Fig. 5

8

Start the machine and check for the absence of leaks.

Repeat the check when the machine has reached its operating temperature.

CHANGING THE FILTER ELEMENT IN LMP 902 - 903 FILTERS Length 1

1

Depressurise the system and clean the filter.

2

Unscrew the air breather plug (item A) and open the oil drain connection (item B, item B1 when the rapid oil drain flange is present) collecting the fluid in a suitable container. When the operation is terminated screw down the plug (item A) tightening it fully down after having checked the condition of its seal.

Close the oil drain connection (B).

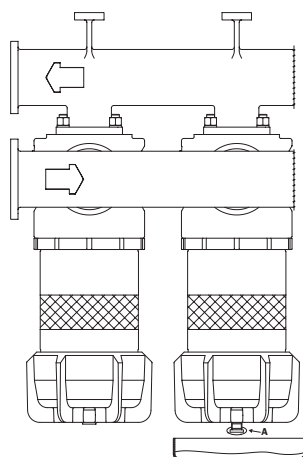


Fig. 1

3

Collect the spent oil and cartridge in a suitable container and dispose of them in compliance with statutory legislation.

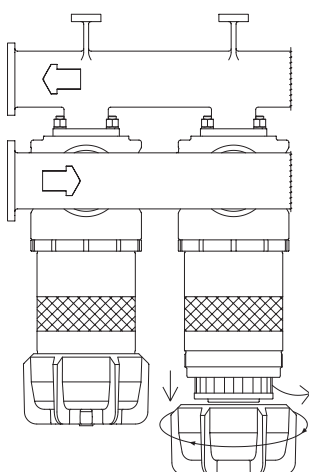


Fig. 2

!!! WARNING !!!

4

To avoid damaging the components clean seal (B), surfaces (A) and threads (C) of the housing and the head.

5

Check the condition of seals (B) if renewing, lubricate the new seals with the operating fluid before installing.

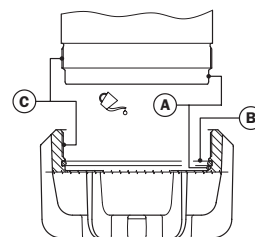


Fig. 3

6

Lubricate the filter element seals with the operating fluid. Fit the lower spigot in the filter element, and insert the element - spigot assembly + as shown in fig. 4 into the housing.

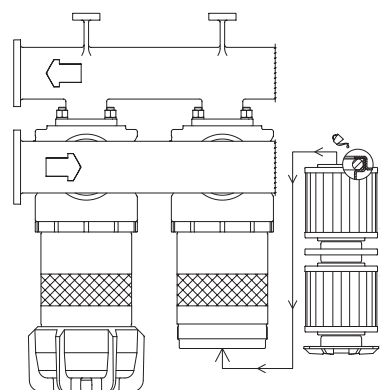


Fig. 4

7

Screw the cover into the housing using the correct tool.

WARNING:

Screw the filter bowl fully into the filter head
" DO NOT OVER - TIGHTEN "

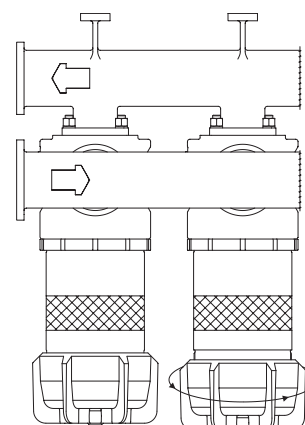


Fig. 5

8

Start the machine and check for the absence of leaks.

Repeat the check when the machine has reached its operating temperature.

9

Start the machine and check for the absence of leaks. Repeat the check when the machine has reached its operating temperature.

CHANGING THE FILTER ELEMENT LMP 950 - 951 FILTERS

1

Depressurise the system and clean the filter.

2

Unscrew the air breather plug (item A) and open the oil drain connection (item B) collecting the fluid in a suitable container. When the operation is terminated screw the plug (item A) tightening it fully down after having checked the condition of its seal. Close the oil drain connection (B).

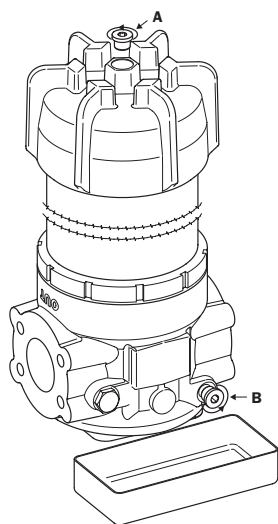


Fig. 1

3

Unscrew and remove the cover using the specific tools, extract the upper spigot, and extract the filter element.

4

Collect the spent oil and cartridge in a suitable container and dispose of them in compliance with statutory legislation.

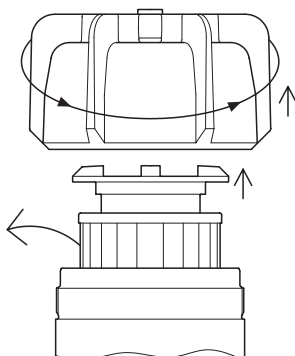


Fig. 2

!!! WARNING !!!

5

To avoid damaging the components clean the seal (B), surfaces (A) and threads (C) of the cover and the housing.

6

Check the condition of seals (B) if renewing, lubricate the new seals with the operating fluid before installing.

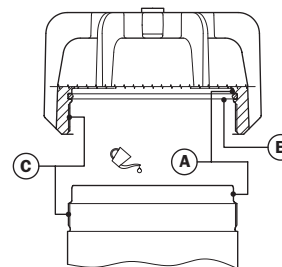


Fig. 3

7

Lubricate the filter element seal with the operating fluid. Insert the filter element in the filter body, fit the spigot at the top of the filter element as shown in fig. 4.

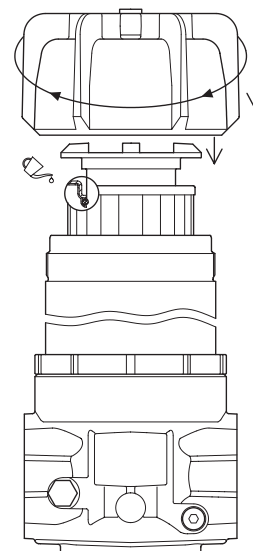


Fig. 4

8

Screw the cover into the housing using the correct tool.

WARNING:

Screw the filter bowl fully into the filter head
“ **DO NOT OVER - TIGHTEN** ”

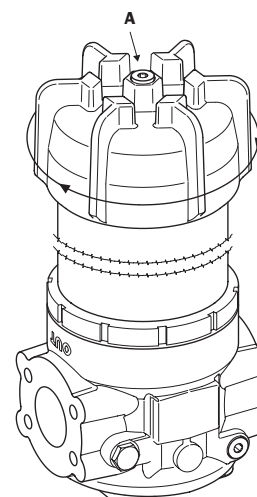


Fig. 5

9

Start the machine and bleed the air by unscrewing (max. one turn) the plug (pos. A). When the operation is terminated tighten the plug fully.

10

Start the machine and check for the absence of leaks. Repeat the check when the machine has reached its operating temperature.

CHANGING THE FILTER ELEMENT LMP 952 - 953 - 954 FILTERS

1

Depressurise the system and clean the filter.

2

Unscrew the air breather plug (item A) and open the oil drain connection (item B, item B1 when the rapid oil drain flange is present) collecting the fluid in a suitable container. When the operation is terminated screw down the plug (item A) tightening it fully down after having checked the condition of its seal.

Close the oil drain connection (B).

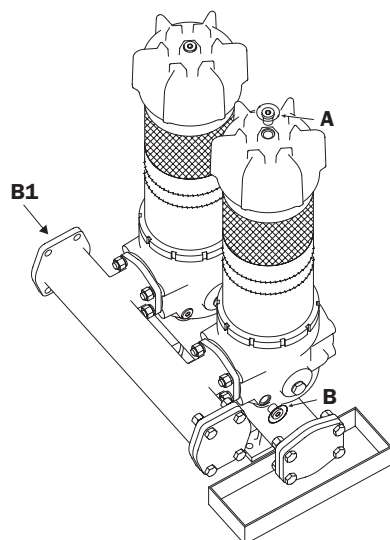


Fig. 1

3

Unscrew the cover using the specific tools and tools, extract the upper spigot, and extract the filter element.

4

Collect the spent oil and cartridge in a suitable container and dispose of them in compliance with statutory legislation.

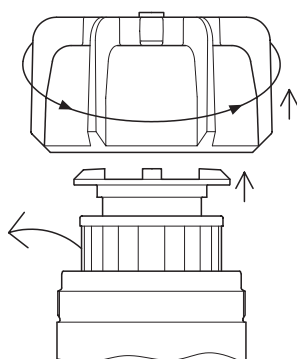


Fig. 2

!!! WARNING !!!

5

To avoid damaging the components clean seal (B), surfaces (A) and threads (C) of the cover and the housing.

6

Check the condition of seals (B) if renewing, lubricate the new seals with the operating fluid before installing.

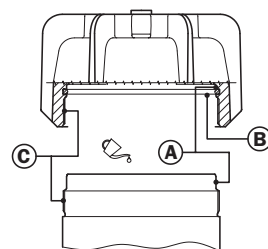


Fig. 3

7

Lubricate the filter element seal with the operating fluid. Insert the cartridge in the head spigot or insert the upper spigot into the element.

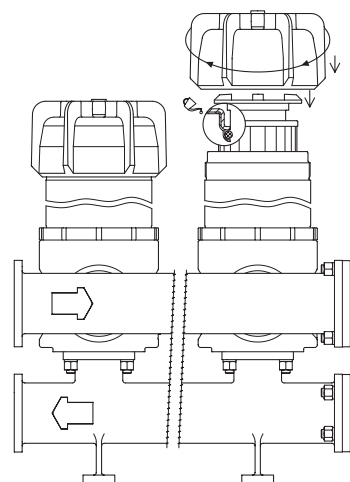


Fig. 4

8

Screw the cover into the housing using the correct tool.

WARNING:

Screw the filter bowl fully into the filter head
“ **DO NOT OVER - TIGHTEN** ”

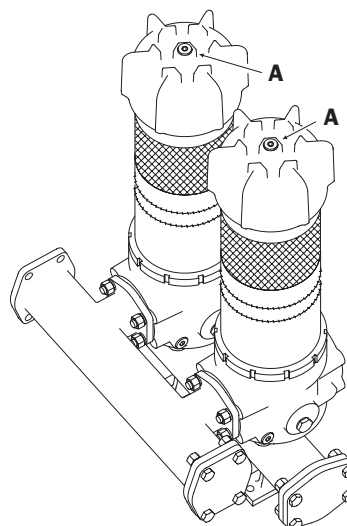


Fig. 5

9

Repeat the steps from point “2” on the other filters. Now start the machine and bleed the air by unscrewing (max. one turn) the plugs (item A). When the operation is terminated tighten the plugs fully.

10

Start the machine and check for the absence of leaks. Repeat the check when the machine has reached its operating temperature.

CHANGING THE FILTER ELEMENT LMD 951 FILTERS

Indication of the lever position referred to the flow.

As shown on the filter handle.

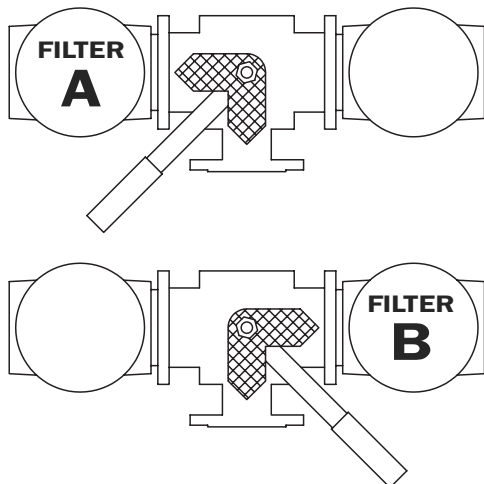


Fig. 1

1

Before rotating the lever from the filter B position to filter A, open the balancing valve (item C) by turning it counterclockwise.

Bleed the air by means of the plug (item D), which must be turned through a **maximum of one revolution**.

After bleeding the air tighten the breather plug and close the balancing valve (item C) by turning it clockwise.

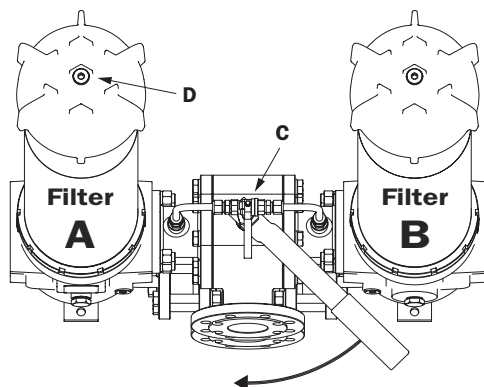


Fig. 2

2

Turn the lever to divert the oil flow from filter B to filter A. Loosen the oil drain plug (item B) to depressurise the filter, unscrew the air breather plug (item A) and open the oil drain connection (item B) or from the opposite part of the head - collecting the fluid in a suitable container.

3

When the operation is terminated screw down the plug (pos. A) tightening it fully down after having checked the condition of its seal. Close the oil drain connection (B).

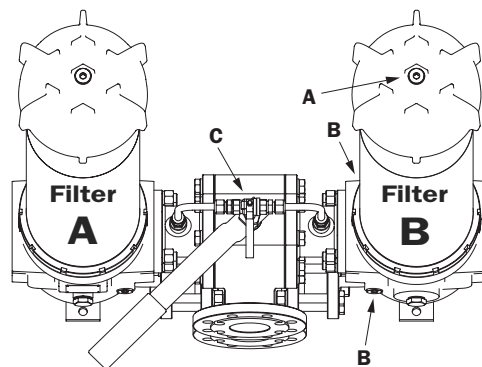


Fig. 3

4

Open the balancing valve (item C) by turning it counterclockwise.

Bleed the air through the plug (item A) which must be turned through a **maximum of one revolution**.

After bleeding the air refit the breather plug and close the balancing valve (item C) by turning it clockwise.

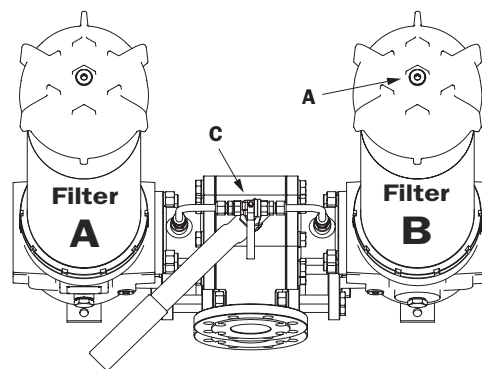


Fig. 4

5

Check for the absence of leaks. Filter "B" is set up for use.