

10 Maintenance

10.8 Change the air filter



Precondition The power supply isolating device is switched off, the device is locked off, a check has been made that no voltage is present.

1. Check the heat exchanger visually for leaks.
2. Have KAESER Service check the heat exchanger for internal leaks and clean if contaminated.

10.8 Change the air filter

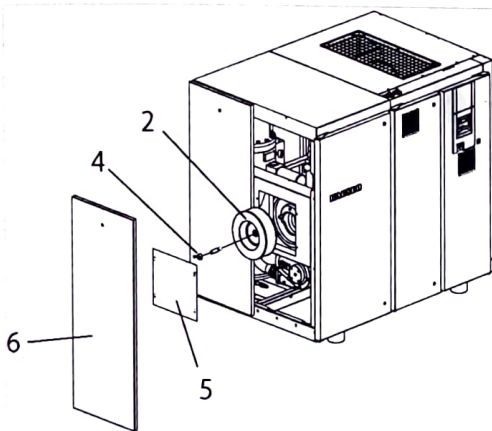


Check that all sealing surfaces match each other. The use of an unsuitable air filter element can permit dirt to ingress the pressure system and cause damage to the machine.

Do not clean the air filter element. A damaged air filter element can permit dirt to ingress the pressure system and cause damage to the machine.

Material Spares

Precondition The supply disconnecting device is switched off, the device is locked off, a check has been made that no voltage is present. The machine has cooled down.

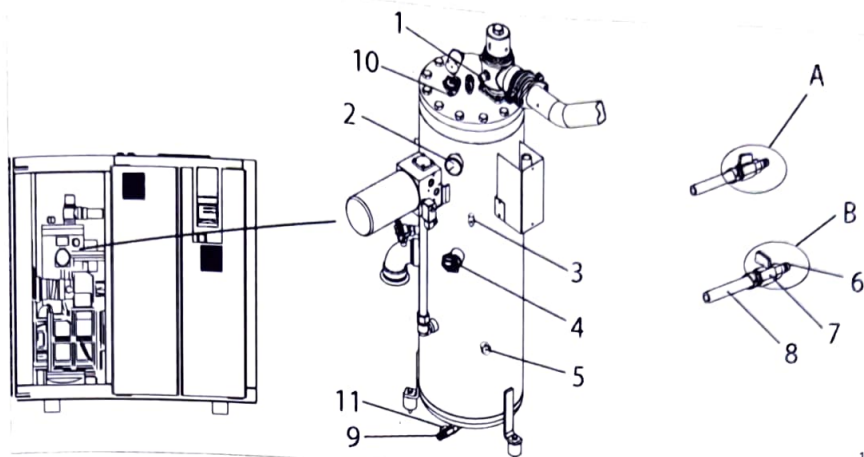


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Fig. 26 Air filter maintenance

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|---|--------------------|---|--------------|
| ② | Air filter element | ⑤ | Cover plate |
| ④ | Nut | ⑥ | Access panel |

1. Remove the access panel ⑥.
2. Remove the cover plate ⑤.
3. Unscrew the nut ④ and remove the filter element.
4. Clean all parts and sealing surfaces.
5. Insert the new element and secure with the nut ④.
6. Screw the cover plate ⑤ onto the machine.
7. Close all access doors and replace all enclosure panels.
8. Switch on the power supply and reset the maintenance interval counter.



10-50062

Fig. 32 Changing the cooling oil, oil separator tank

- | | |
|---|--|
| <ul style="list-style-type: none"> ① Hose coupling (air cooler venting) ② Pressure gauge ③ Hose coupling (oil separator tank venting) ④ Oil filling port with plug ⑤ Oil level indicator ⑥ Male hose coupling/fitting ⑦ Shut-off valve | <ul style="list-style-type: none"> A Shut-off valve open B Shut-off valve closed ⑧ Maintenance hose ⑨ Hose coupling (oil drain) ⑩ Shut-off valve (venting line) ⑪ Shut-off valve (oil drain) |
|---|--|

Oil changing using internal pressure	Changing the oil using an external compressed air source
<p>The machine has been running for at least 5 minutes under LOAD.</p> <p>The machine is fully vented, the pressure gauge on the oil separator tank reads 0 bar.</p> <ol style="list-style-type: none"> 1. Close the shut-off valve ⑩ in the venting line. 2. Select IDLE running. 3. Start the machine and watch the oil separator tank pressure gauge ② until it reads 3–5 bar. 4. Switch off and lock out the power supply disconnecting device and check that no voltage is present. 5. Wait at least two minutes for oil to flow back to the separator tank. 	<p>The power supply isolating device is switched off, the device is locked off, a check has been made that no voltage is present.</p> <p>The machine is fully vented, the pressure gauge on the oil separator tank reads 0 bar.</p> <p>An external source of compressed air is available.</p> <ol style="list-style-type: none"> 1. Close the shut-off valve ⑩ in the venting line. 2. With the shut-off valve closed, insert the male hose fitting ⑥ into the hose coupling ③. 3. Connect the maintenance hose to the external air supply. 4. Open the shut-off valve ⑦ until the pressure gauge on the oil separator tank reads 3–5 bar. 5. Close the shut-off valve ⑦ and remove the male hose fitting from the coupling.

Draining the oil from the separator tank

1. Have the oil container ready.
2. With the shut-off valve ⑦ closed, insert the male hose fitting ⑥ into the hose coupling ⑨.
3. Place the end of the maintenance hose in the oil container and secure it in place.
4. Open the shut-off valve ⑪.

10 Maintenance

10.16 Changing the Cooling Oil

5. Slowly open the shut off valve **7** in the maintenance hose to release oil and close immediately when air escapes.
6. Close the shut-off valve **11** and unplug the male hose fitting.

Draining the oil from the cooler

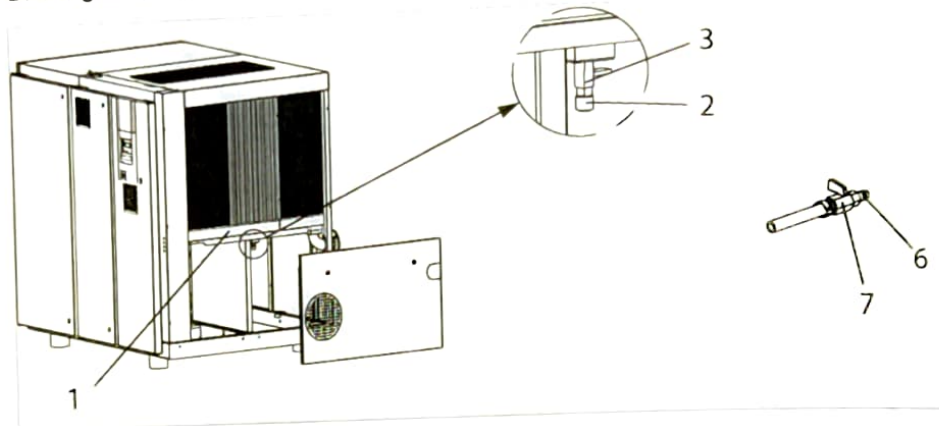


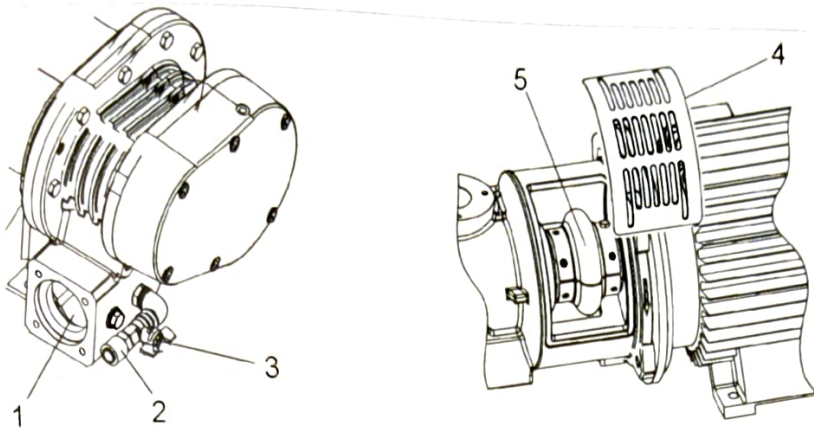
Fig. 33 Changing the cooling oil, oil cooler

- 1** Oil cooler
- 2** Hose coupling (oil drain)
- 3** Shut-off valve

- 6** Male hose coupling/fitting
- 7** Shut-off valve

1. Have the oil container ready.
2. With the shut-off valve **7** closed, insert the male hose fitting **6** into the hose coupling **2**.
3. Place the end of the maintenance hose in the oil container and secure it in place.
4. Open the shut-off valve **3**.
5. Slowly open the shut-off valve **7** and allow cooling oil and air to escape completely until the pressure gauge reads 0 bar.
6. Close the shut-off valve **3** and unplug the male hose fitting.

Draining the oil from the airend



10-SC318

Fig. 34 Changing the cooling oil, airend

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|-----------------------------------|-----------------|
| ① Compressed air outlet on airend | ④ Safety screen |
| ② Hose coupling (oil drain) | ⑤ Coupling |
| ③ Shut-off valve | |

1. Have the oil container ready.
2. With the shut-off valve closed ⑦, insert the male hose fitting ⑥ (Fig. 32) into the hose coupling ②.
3. Place the end of the maintenance hose in the oil container and secure it in place.
4. Open shut-off valves ③ and ⑦ (Fig. 32)
5. Remove the coupling safety screen ④ and turn the coupling ⑤ by hand at least five revolutions until all the oil has run out.
6. Fit the safety screen again.
7. Close the shut-off valve ③ and unplug the male hose fitting.

Result The cooling oil is drained from the airend.

A small amount of cooling oil may flow back into the oil cooler and oil separator tank as a result of turning the coupling.

Remove this by repeating the steps for draining oil from the separator tank and oil cooler.

Option W1 Draining the oil from the external heat recovery system

If the machine is connected to an external heat recovery system, drain the oil from the heat exchanger at a suitable point.

Precondition The power supply isolating device is switched off,
the device is locked off,
a check has been made that no voltage is present.

The machine is fully vented, the pressure gauge on the oil separator tank reads 0 bar.

1. Have the oil container ready.
2. Open the external heat recovery system and allow the oil to drain completely.
3. Close the external heat recovery system.

Material Replacement part
Cooling oil container

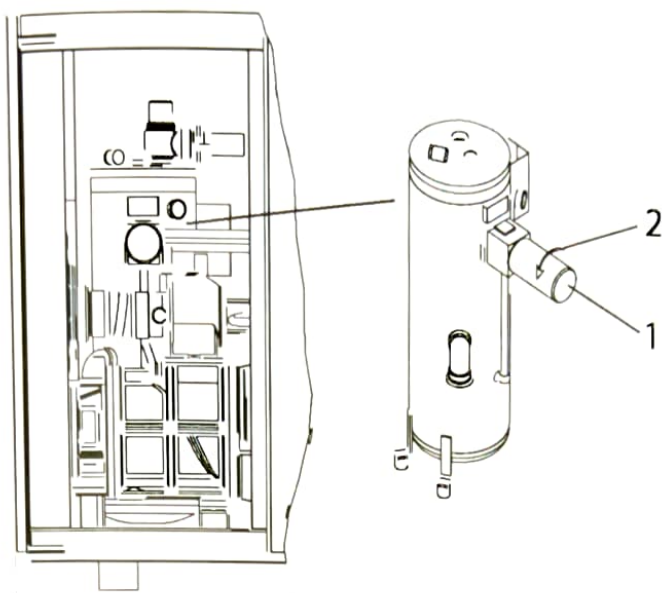
precondition The power supply disconnecting (isolating) device is switched off, the disconnect device is locked in the off position, a check has been made that no voltage is present.
The machine is fully vented, the pressure gauge on the oil separator cartridge reads 0 bar.



WARNING

There is risk of burns from hot components and oil.

- Wear long-sleeved clothing and gloves.



10-S0064

Fig. 36 Changing the oil filter

- ① Oil filter
- ② Direction to unscrew

Changing the oil filter

1. Unscrew the oil filter anti-clockwise, catch oil spillage and dispose of in accordance with environmental protection regulations.
2. Lightly oil the new filter's O-ring.
3. Turn the oil filter clockwise by hand to tighten.



- Dispose of parts and materials contaminated with oil in accordance with environmental protection regulations.

Starting the machine and carrying out a test run

1. Close all access doors; replace and secure all removable panels.
2. Open the user's shut-off valve between the machine and the air system.
3. Switch on the power supply and reset the maintenance interval counter.

4. After about 10 minutes, check the oil level again and top up if necessary.
5. Switch off the machine and visually check for leaks.

10.18 Changing the oil separator cartridge



The machine must be isolated from the compressed air network and completely vented before undertaking any work on the pressure system.
The oil separator cartridge cannot be cleaned.

The life of the oil separator cartridge is influenced by:

- contamination in the air drawn into the compressor,
- Adherence to the changing intervals for:
 - Cooling oil
 - Oil filter
 - Air filter

Material Spares
Cleaning cloths

Precondition The supply disconnecting device is switched off, the device is locked off, a check has been made that no voltage is present.
The machine is fully vented, the pressure gauge on the oil separator tank reads 0 bar.

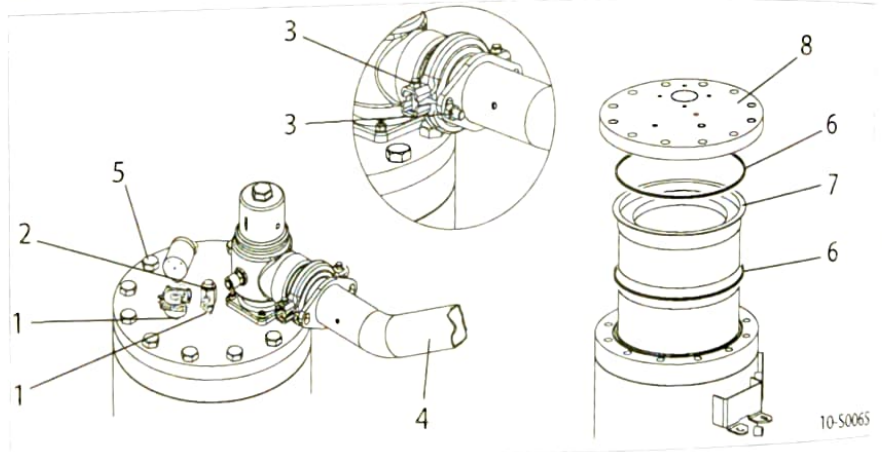


Fig. 37 Changing the oil separator cartridge

- | | |
|-------------|---------------------------|
| ① Fitting | ⑤ Fixing screws |
| ② Dirt trap | ⑥ Gasket |
| ③ Fitting | ⑦ Oil separator cartridge |
| ④ Air pipe | ⑧ Cover |

Changing the oil separator cartridge

1. Unscrew the fitting ① and carefully put the parts to one side, then pull out the copper pipe from the dirt trap ②.
2. Loosen the fitting ③ and disconnect the air pipe ④ completely if necessary.

10.19 Assembling flexible pipe connections

3. Remove the cover fixing screws **5** and carefully remove the cover **8**.
4. Take out the old oil separator cartridge **7** together with the gaskets **6** and dispose of according to environmental protection regulations.
5. Clean all sealing faces.
6. Insert the new oil separator cartridge with gaskets and screw down the cover **8**.
7. Renew the O-ring and strainer in the dirt trap **2**.
8. Secure the air pipe **4** with a new self-locking nut.



See chapter 10.19 "Assembly of flexible pipe connections"



9. Replace and tighten all fittings.
 - Dispose of parts and materials contaminated with oil in accordance with environmental protection regulations.

Starting the machine and carrying out a trial run

1. Close all access doors, replace and secure all removable panels.
2. Open the user's shut-off valve between the machine and the compressed air network.
3. Switch on the power supply and reset the maintenance interval counter.
4. Stop the machine after 10 minutes and visually check for leaks.

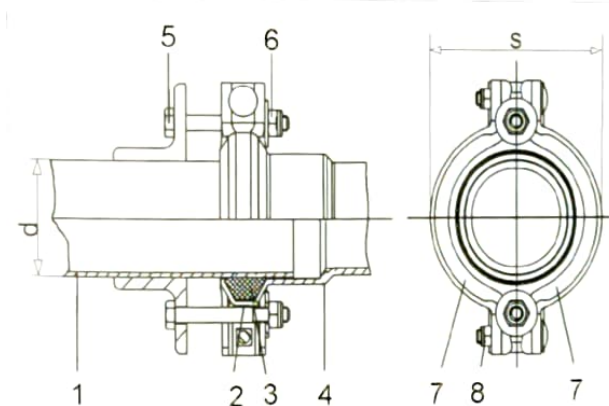
10.19 Assembling flexible pipe connections



With the machine depressurized, the clamping bolts must be freely movable by hand and parallel with the pipe.

All clamping bolts must be equally loaded.

Replace the self-locking nuts.



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Fig. 38 Assembling flexible pipe connections

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|-------------------------|--|
| 1 Pipe | 6 Self-locking nut |
| 2 Seal holder | 7 Pipe clamp halves |
| 3 Gasket | 8 Self-locking nut |
| 4 Bush | d Pipe diameter (outside) |
| 5 Clamping bolts | s Dimension of the flexible pipe joint under tension. |