1. Content of the Oil Sampling Kit

- 2 x reinforced tubing with quick coupling connectors
- 1 x tubing with Luer Lock connection for syringes
- 4 x Adaptors (screws: G1/2"; G3/8"; G3/4"; G5/8")
- 1 x Screwing bottle cap with quick coupling connection
- 1 x Multifunctional gripper
- 2 x Tubing for oil disposal with quick coupling connection

Table of contents:

1. Content of the Oil Sampling Kit
2. Sampling of an oil sample in a bottle
3. Sampling of an oil sample in a syringe
4. Documentation
2. Sampling of an oil sample in a bottle

2.1. Choose the sampling location - AA021, AA022, AA023.

2.2. Use an adequate adapter and loosen the tap screw nut with the gripper.

2.3. Connect the transformer and the sampling kit valve (top) with the reinforced tubing.

2.4. Connect the second reinforced tubing to the bottom sampling kit valve and from the other side with the black tygon flexible tubing with a coupling connector. The other end of the black flexible tubing leads to the oil disposal vessel. Open the red stop cock. Use this setup to rinse approx. 3 l of oil.
2.5. Close the red stop cock. Remove the tygon flexible tubing with the coupling connector. Connect the free end of the reinforced tubing to the bottle cap (silver coloured coupling).

2.6. Connect the tubing for oil disposal to the bottle cap (brass coloured coupling) and the end to a disposal vessel.

2.7. Open the red stop cock and start with the sampling (directing the oil in the disposal vessel), until the temperature remains constant (at least 2 l oil should be disposed). The temperature should be recorded.
2.8. Close the red stop cock and disconnect the tubing from the bottle cup. **Twist off the bottle cap** and let the oil from the tubing fill the bottle full to the brim.

2.9. The bottle should be closed with the screw cap.
3. Sampling of an oil sample in a syringe

Repeat steps 2.1. – 2.4.

3.1. Connect the tubing with the Luer lock too the syringe 3 way stopcock and the other end to the quick coupling connection. Open the red stopcock. Turn the 3 way stopcock in the way shown on the foto and let the oil fill the syringe.

3.2. Close the red cock. Turn the syringe 3 way stopcock as shown on the foto. Press the piston of the syringe until all air bubbles are removed.

3.3. Fill in the syringe in position 3.1.

3.4. After filling the syringe, turn the 3-way stopcock in the way shown in the foto and disconnect the tubing.

ÉRepeat procedures 3.1. and 3.2.

3.3. Fill in the syringe in position 3.1.

3.4. After filling the syringe, turn the 3-way stopcock in the way shown in the foto and disconnect the tubing.
3.5. Label the syringe and place it in the protecting housing.
After sampling all parameters should be documented and the bottle labelled. A sampling protocol is included:

### 105.11 Required information concerning oil sample

**Requested analysis:**
- Colour
- Purity
- Neutralization value
- Breakdown voltage
- Water content
- Loss factor at 90°C
- Interfacial tension
- PCB-content
- Furanalysis
- Gas-in-oil-analysis (DGA)
- Corrosive Sulfur
- DBDS
- Other analyses

**Please answer the following questions with care:**
- Make
- Customer
- Location
- Year of manufacture
- Type
- Power rating
- Ratio
- FTNR (Product No.)
- WNR (Job No.)
- Sample No.
- Date sample taken
- Type of oil
- Quantity of oil
- Oil temperature when sample taken

**Sample taken from:**
- Oil sample valve
- Oil drainage device
- Others
- A 2293140 DIN 42 551

**Tank:**
- Top
- Middle
- Bottom

**Conservator:**
- Transformer
- OLTC
- Bushing
- Others

**Bushing:**
- OLTC tank

**Reason for sample taking:**
- Date of operation fault
- Routine checkup
- Date of repair
- Others
- Date of oil treatment/ reclaiming

**Further informations and previous history:**

**Sample taker:**
- Name
- Company/Dept.
- Date
- Phone

**Lab information:**
- Consecutive No.
- Date sample received
- Date sample analysed
- Type of sample container
- Special features