

1. General

The service and maintenance manual describes possible failure causes at leakages and the replacement of seals at the PISTER Multicoupler PMK.

The hand-operated PISTER Multicoupler is abbreviated in the service and maintenance manual with PMK, the hydraulic locking device with HV. The service and maintenance manual has to be read carefully and has to be retained. The instructions of the general operating manual (document no. 75-007-078) have to be followed, especially the safety-instructions.

For non-observance of the service and maintenance manual, the manufacturer assumes no liability and warranty. Qualified personnel are necessary to the application of this manual. It is the responsibility of the operator or planner to ensure that national regulations for accident prevention such as local safety regulations of the operating company are not replaced by this manual, they should rather be considered with priority. The manufacturer maintains all rights for technical changes and improvements at any time.

2. Leakage of multicoupler system

Hint



A small oil film on the couplings after the disconnection is normal and is not a leakage. If larger leakages are visible, check which coupling is leaky. Longer operating time increases the leakage of the coupling plugs.

If the coupling does leak replace the seals and the couplings are in new condition. Seals can only be replaced at the coupling plug type 2. At the PMK with coupling type 1 the defective female coupling or plug has to be replaced!

Attention



Switch off motor, depressurize system!
Disconnect PMK system

3. Leakage at female coupling

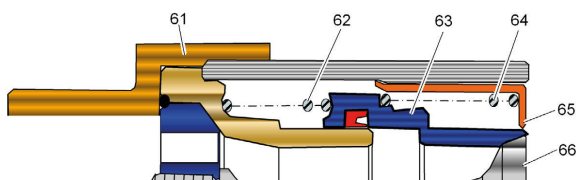


Figure 1: troubleshooting at female coupling

Check the female coupling (figure 1):

- Prepare oil container to collect the leak oil
- Visual control of the couplings. Is there a leakage between the dust cover 65 and the valve 66, there is outer leakage
- Seal ring in valve 66 is damaged or a particle is trapped
- Push down the dust cover 65 with a screwdriver. While pushing down the dust cover 65 oil is running out
- Remove the foreign particle

Replace the female coupling if the problem cannot be solved.

4. Leakage coupling plug

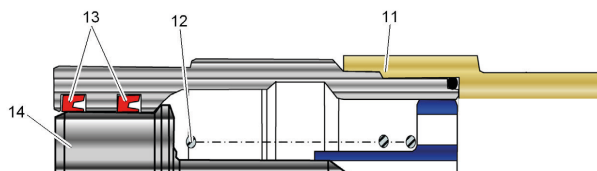


Figure 2: troubleshooting at plug

Hint



If the coupling plug is leaky the leak oil spreads in the front area of the female coupling, please see arrow in figure 3. The leaky coupling plug splatters the oil when connected in this spring chamber of the female coupling. At disconnected condition there are oil drops recognizable at the female coupling.

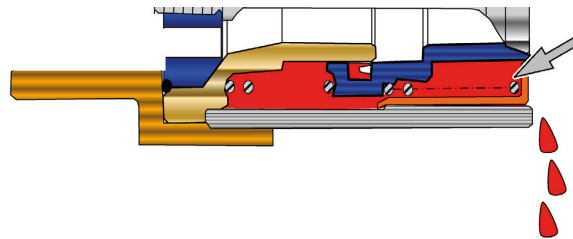


Figure 3: oil-filled area in the female coupling

Course of action:

- Localise the leaky coupling plug
- Remove the oil and grease from the female couplings (e.g. with brake cleaner)
- Connect PMK
- Pressurise all lines
- Disconnect immediately after releasing pressure
- Check couplings (oil film at the female coupling indicates a leaky coupling plug)
- Replace the seal rings, please see figure 5

5. Replacing the seal rings at the coupling plugs

Attention

Switch off motor, depressurize system!
Disconnect PMK system



Hint



If the valve 14 of the coupling plug can't be pushed in, there is residual pressure in the hydraulic cycle. Release pressure in the system!

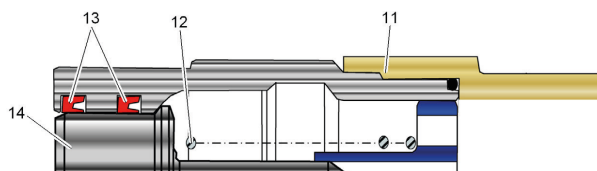


Figure 4: Assembly coupling plug

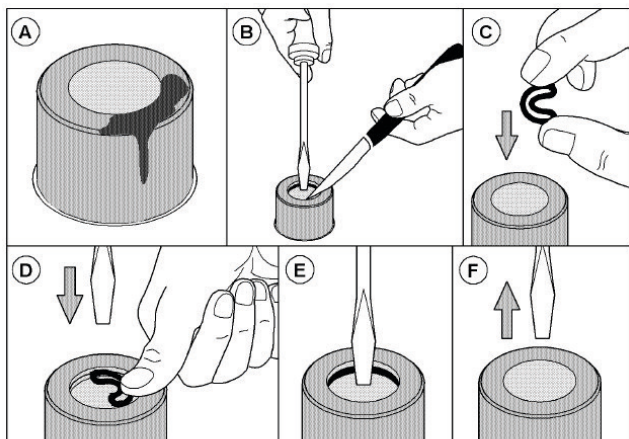


Fig. 12 Dichttring wechseln

Figure 5: Replace of seal ring

- Identify leaky coupling plug
- Push in the valve 14 of the plug with a screwdriver and pick out the defective seal ring 13 with a spiky object.
- Press the new seal ring together and put it with the open side downwards on the valve 14.
- Push the valve 14 downwards to the notch, locate the screwdriver in the middle of the seal ring and remove the hand.
- Let the seal ring spring into the notch.
- Remove the screwdriver. The valve 14 has to move upwards. If necessary push the seal ring again until the valve moves up.

Replace the coupling plug if the problem cannot be solved.

5. Leakage at the hydraulic locking device HV

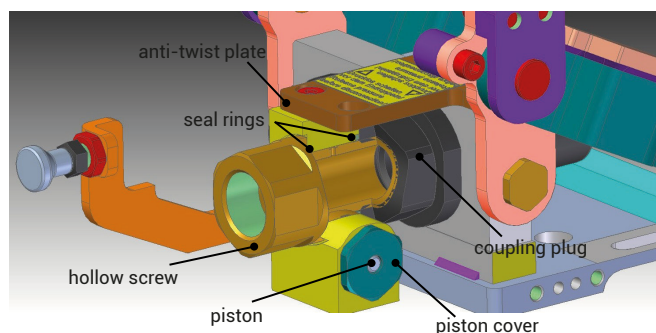


Figure 6: Hydraulic locking device HV

Hint



A small oil film on the piston of the hydraulic locking is normal and is not a leakage. Are there larger leakages between the piston and the piston cover, the hydraulic locking device has to be replaced. Is the leakage between the HV and the hollow screw or rather between the HV and the coupling plug, the particular seal ring can be replaced.

Attention



Switch off motor, depressurize system!
Disconnect PMK system

Course of action:

- Remove the anti-twist plate, unscrew the 3 screws on the top
- Untighten the hollow screw by holding the coupling plug with an adequate tool. Replace the defective seal ring
- Connect PMK. Check if the piston of the HV moves out under pressure. Only this prevents an unintentional disconnection under pressure!

Replace the hydraulic locking device if the problem cannot be solved.

Attention



safety device! Repair of the hydraulic locking device is not allowed!