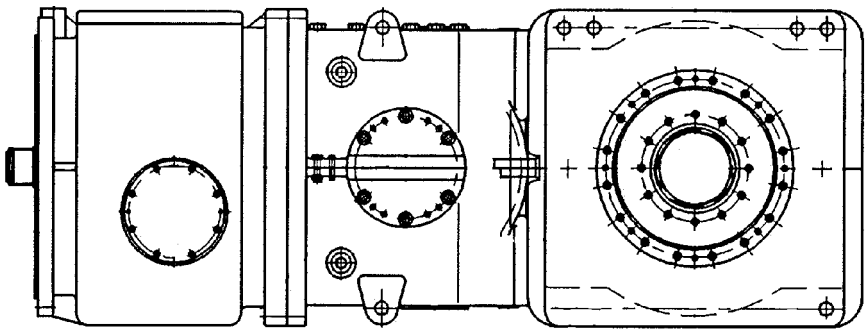
Reliability at work

Operating Manual

Gearbox KP-30 CST

Doc. no.: 1949 019 000 BA 00



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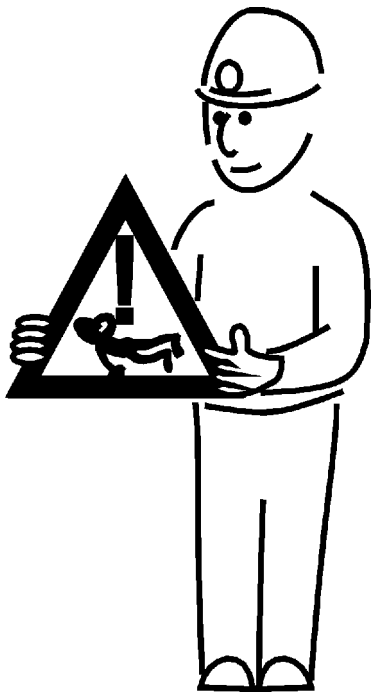
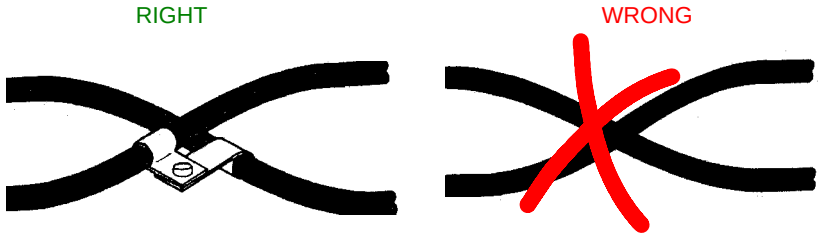
2 Your safety



- cannot chafe,

Fig. 5: Laying hydraulic hoses, crossing



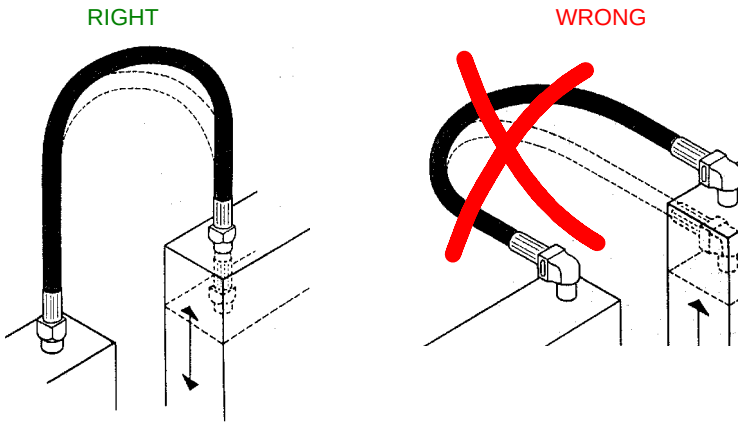
- are not kinked,
- do not have to withstand tensile strains,
- are protected against thermal radiation,
- are accessible at all times.

Only insert hydraulic hoses in the sockets by hand. Never try to drive the hydraulic hoses in with a tool as this will damage the connections.

When installing the hydraulic hoses, ensure that they cannot be:

- torn out,
- kinked,
- crushed,
- driven over,
- twisted (fig. 6).

Fig. 6: Laying hydraulic hoses, connections on moving parts



Installation

Installing the gearbox

Caution!
Serious damage can be caused to the gearbox and the drive as a result of incorrect installation.
Only install the gearbox under instructions from Bucyrus specialists.

Flange plate

Prior to assembly of the gearbox the flange plate must be fitted.

Check that all bolted connections between drive frame and flange plate are in place and check the tightening torques.
Make sure that all bolts for securing the gearbox to the flange plate have been fitted.

Notice!
Dirt could get into the gearbox if the O-rings for the flange plate are inserted incorrectly. That could result in considerable damage to the gearboxes!
Make sure when installing the flange plates that the O-rings are installed in the correct position.

Important information for the installation of the gearbox:

- Remove the transport protection devices from the input and output shafts.
- All flange surfaces, centering bores, parallel keys and grooves must be clean and free from burr.
- Before flanging on, carefully grease the gearing - use B3 lubricating paste in accordance with chapter 6, section: “Recommendations for lubricating greases and lubricating pastes”.
- The gearbox must be positioned exactly on the centering bores, plug-type connections, and parallel keys.
- Align the gearing in such a way that tooth and tooth gap are exactly opposite one another to ensure that they mesh smoothly. Avoid damage to the gearing and make sure the gearbox is not tilted when installing it!
- After installation of the gearbox, there must be no strain between gearbox and drive frame or between gearbox and input shaft.

5 Operation

The conveyor motor can then be turned back on again.

Pressure sensor PDS 100

☞ Switch off the conveyor motor.

☞ Open the round cover on the square cover (on the right, seen from the motor) by loosening 6 hexagon screws M 12 (wrench size = 19 mm).

☞ Release the staple lock on the hydraulic plug-type connection and pull out the pressure sensor.

☞ Insert the new pressure sensor PDS 100 and lock it with the staple lock.

☞ Close the round cover and screw it on with 6 hexagon screws (M 12) (wrench size = 19 mm). Tightening torque M_A = 80 Nm.

The conveyor motor can then be turned back on again.

Input speed sensor

☞ Switch off the conveyor motor.

☞ Open the square cover by unscrewing the hexagon screws M 12 and removing the cover.

☞ Disconnect the electrical connection at plug-type connection “D” at the distribution box (see chapter 6).

☞ Unscrew the three hex. socket head cap screws M 12 (wrench size = 10 mm) and pull the speed sensor out of the bore in the gearbox.

☞ Insert the new speed sensor in the gearbox bore and secure it with three hex. socket head cap screws M 12. Tightening torque MA = 80 Nm.

☞ Electrical connection at plug-type connection “D” in the distribution box (see chapter 6).

☞ Fit the rectangular cover and close it with 16 hexagon-head screws M 12. Tightening torque MA = 80 Nm.

The conveyor motor can then be turned back on again.

6 Technical data

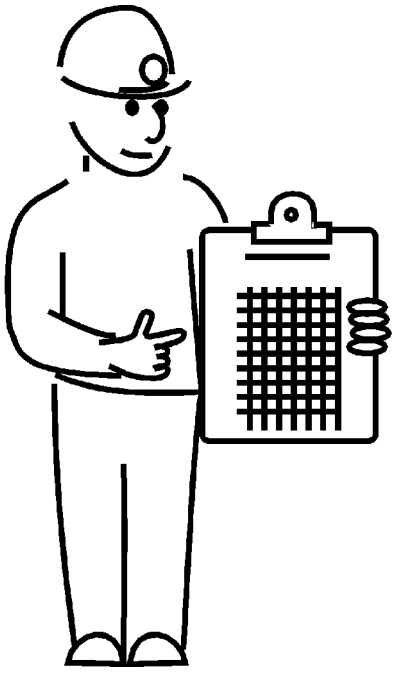
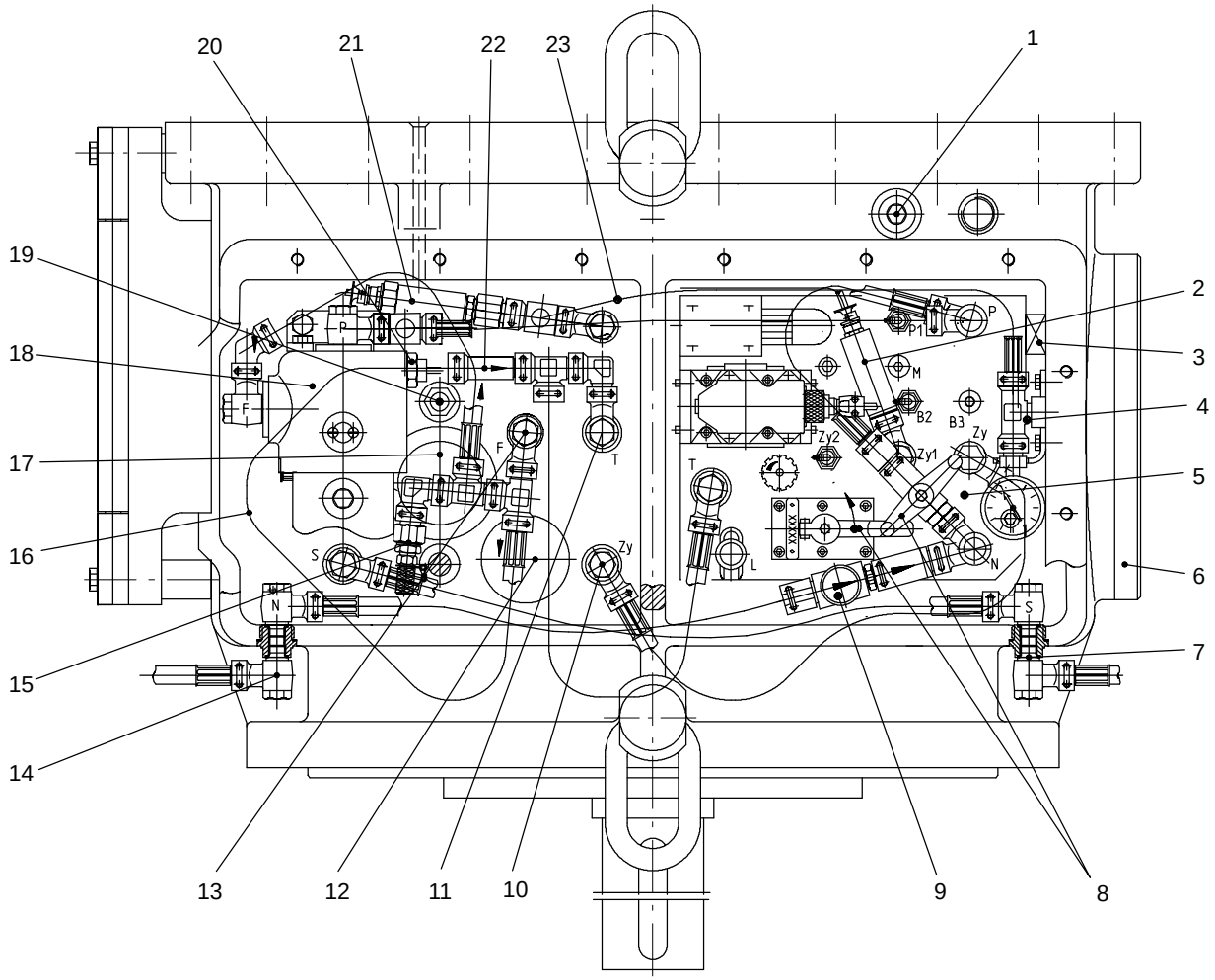


Fig. 32: Hydraulic control CST

Illustration without distribution box



1 Dipstick (only P-30 CST)
2 Clutch pressure sensor
3 System pressure switch
4 Pressure gauge for cooling oil pressure
5 Hydr. control CST
6 Eyehole cover
7 Suction port for hand pump and oil analysis
8 Lever for normal/emergency operation
9 Line filter
10 to CST clutch
11 to intake tank
12 Input speed sensor
13 from HD pump
14 Pressure port for hand pump
15 Pump pressure measurement connection
16 to pressure relief valve
17 free for feedback transmitter (oil level and temperature)
18 High pressure filter
19 Air vent HP pump
20 Differential pressure switch for HP filter
21 Cooling oil pressure sensor
22 Pressure relief valve
23 to pressure gauge for cooling oil pressure

Emergency operation with hand pump

Fig. 40: Emergency operation with hand pump