



## 4.0.1 Steering

### Contents, Steering

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You will find further information about the steering under:

### 4.0.2 Hydraulic- Functional – Diagram Steering

## 4.0.1 Steering

### Work hydraulic pumps in the rear section of the CM 1650 triple gear pump

Triple gear pump (2.2) work hydraulics

Gear pump 3 work hydraulics

Oil supply for front control block (2.11) steering (9 L/Min)

and the solenoid valves:

Y12 circulation off / work hydraulics on

Y13 lower front tool carrier (floating position)

Y14 raise front tool carrier (suction hose)

Y15 swivel out rotating brush R-H

Y16 swivel in rotating brush R-H

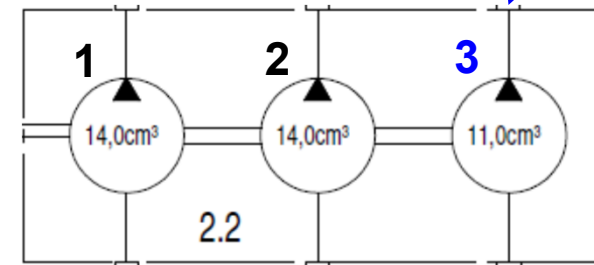
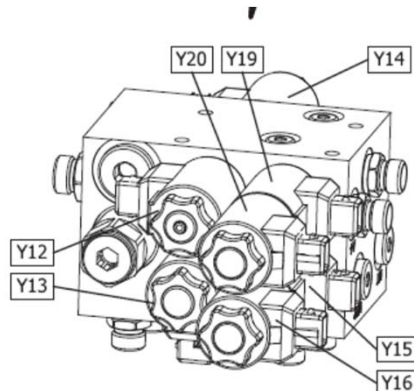
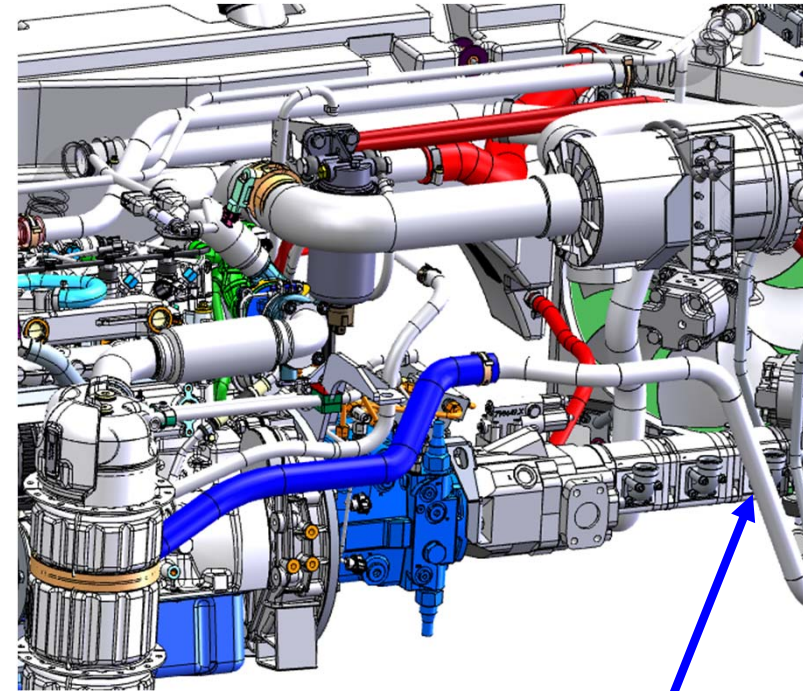
Y19 swivel out rotating brush L-H (swivel snow blade)

Y20 swivel in rotating brush L-H (swivel snow blade)

As well as

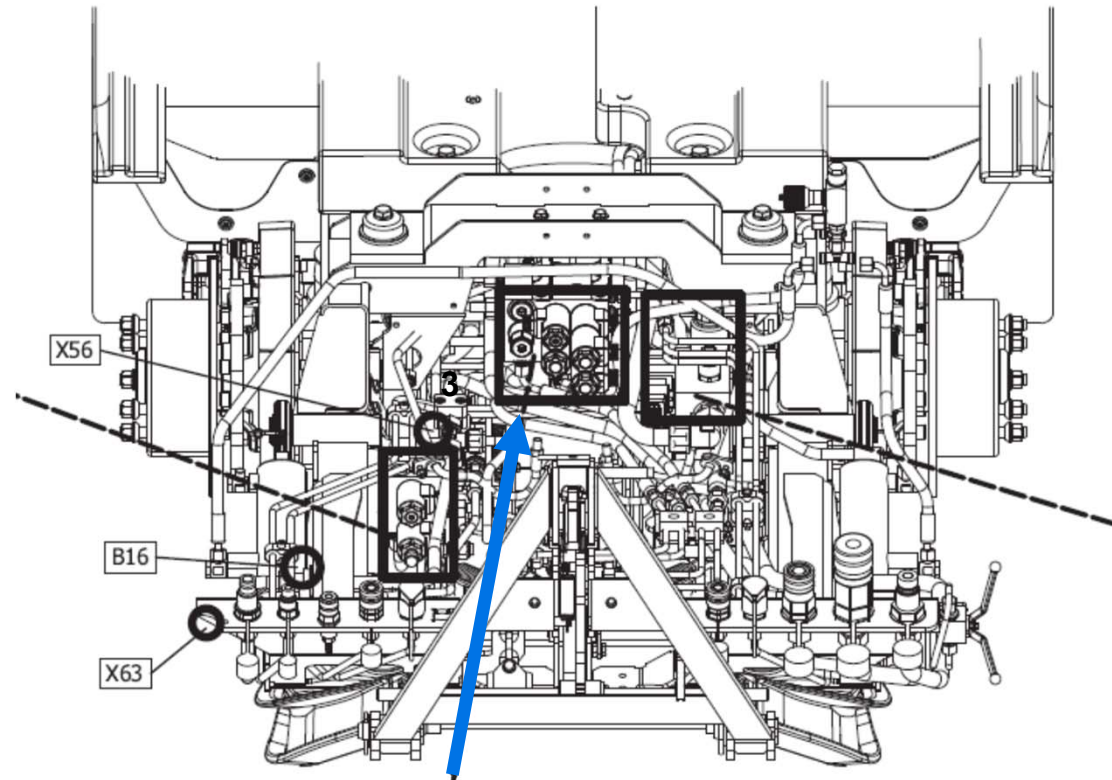
Y17 raise hopper (in the hydraulic control block 2.12)

Y18 lower hopper (in the hydraulic control block 2.12)



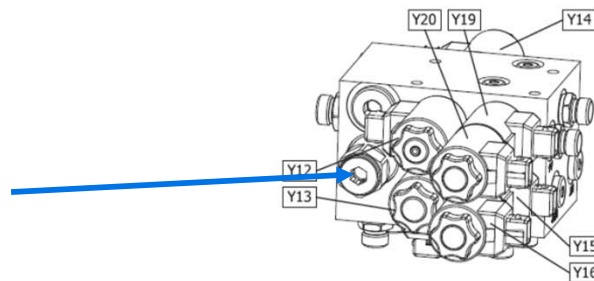
### 4.0.1 Steering

#### Hydraulic arrangement of the hydraulic control block 2.11 in the front wagon CM 1650

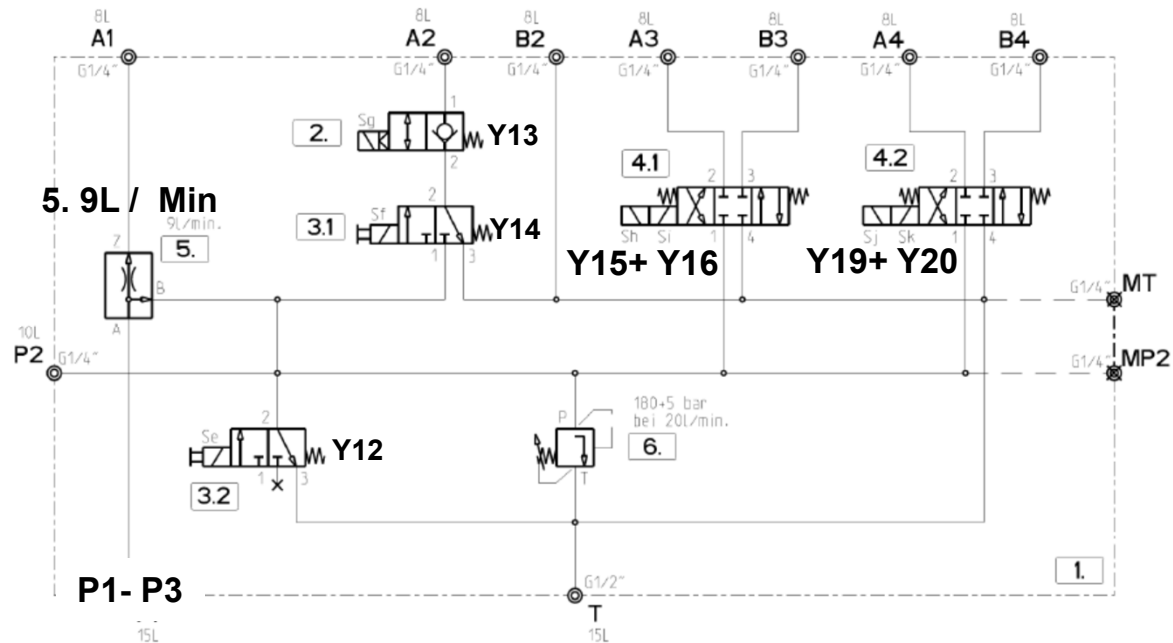
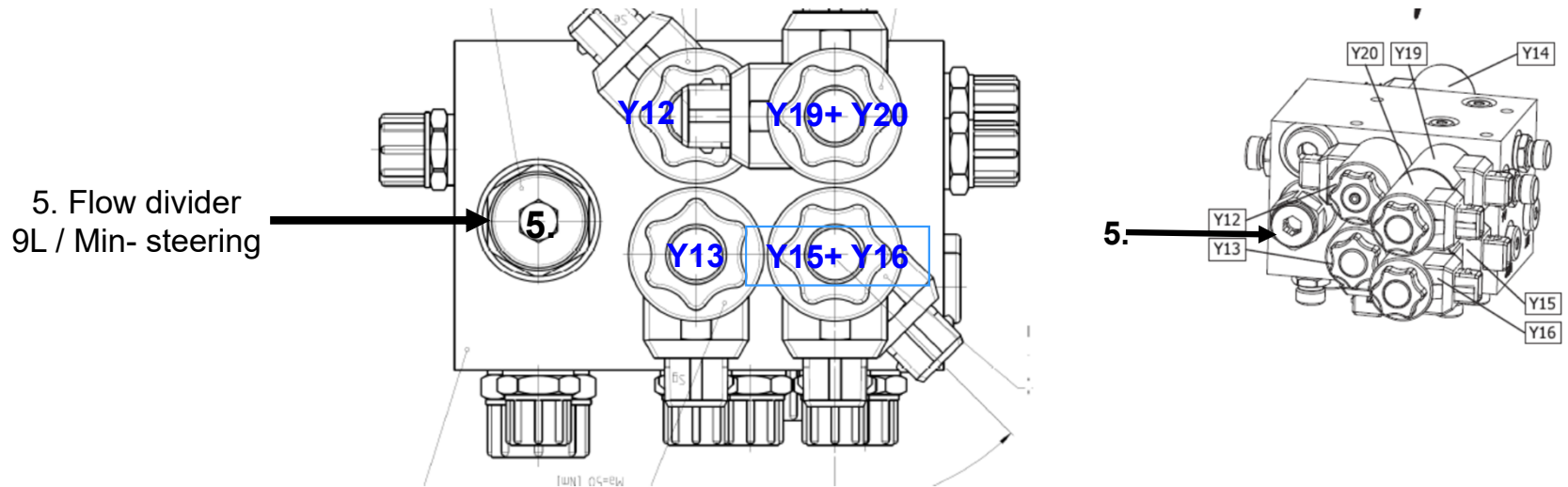


Hydraulic block (2.11)  
front attachment, solenoid valves,  
Y12, Y13, Y14, Y15 + Y16, Y19 + Y20

5. Flow divider  
9L / Min- Steering



### 4.0.1 Steering





### 4.0.1 Steering

### Steering unit (2.44) OSPN 80 ON, 90496571, PN 0141210

SEE ALSO CATALOGUE FOR HYDROSTATIC STEERING COMPONENTS

**5x6,5 DIN 6888 (Key not incl.)**

**ISO symbol**

**Sauer-Danfoss symbol**

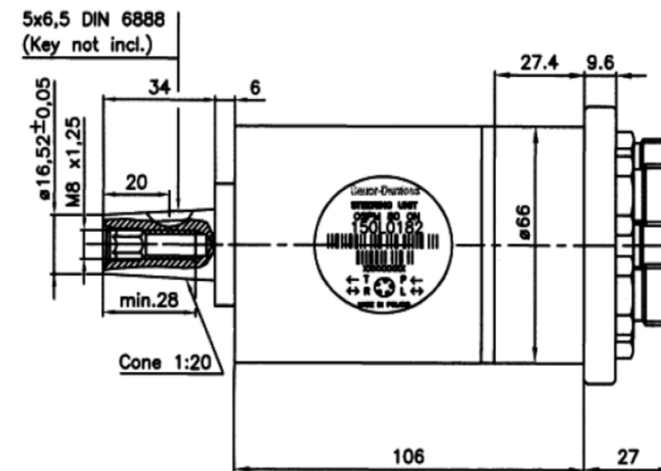
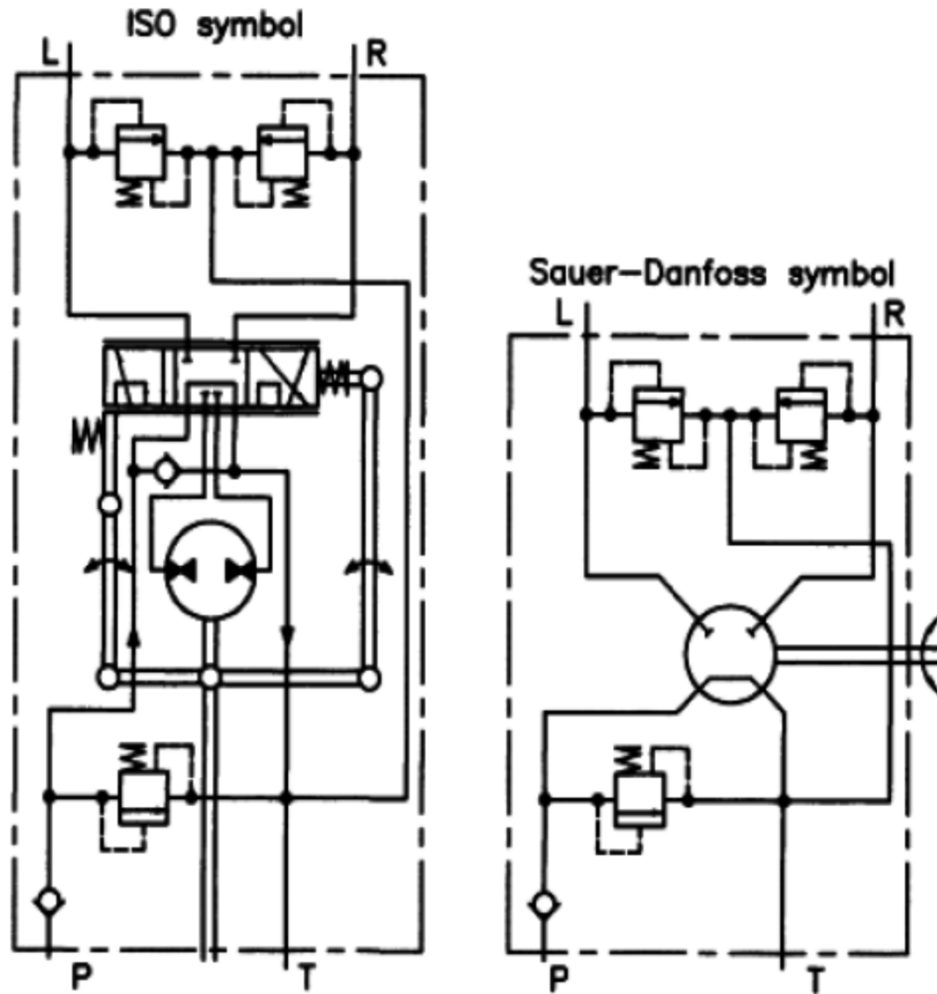
Check valve in P	INCLUDED
Shock valves	175-195 bar
Pressure relief valve	120-125 bar
P,T,L and R	9/16-18 UNF ORFS ISO 8434-3
BLACK PAINTED	

Scale 0 10 20 30 40 50 60 70 80 90 100mm

150L0182

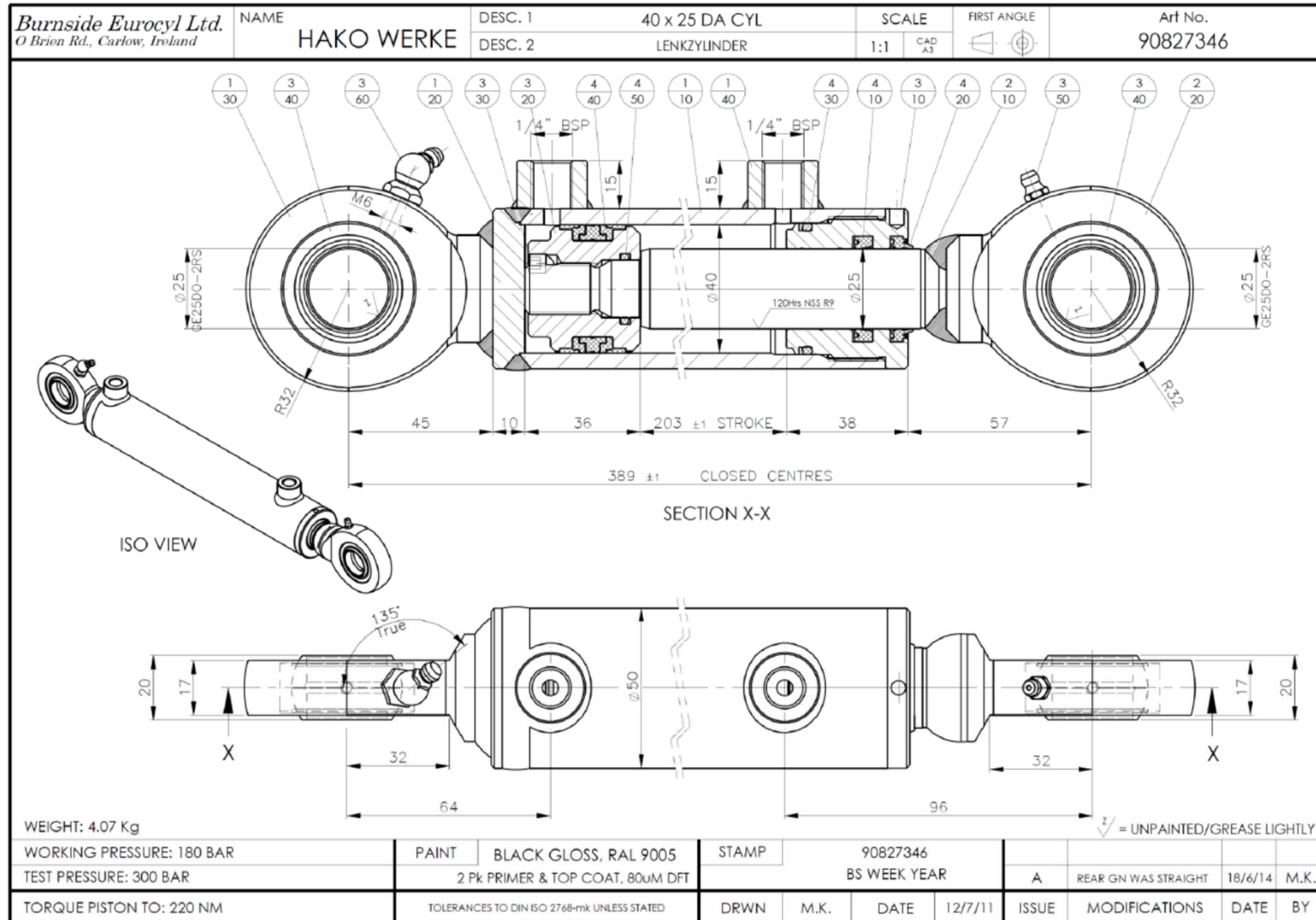
### 4.0.1 Steering

Steering unit (2.44) OSPN 80 ON, 90496571, PN 0141210



### 4.0.1 Steering

### Steering cylinder, 90827346, PN 01490030







## 4.0.1 Steering

### Steering - functional faults and fault location

I. The steering is sluggish or jumps when the hydraulic oil is warm:

**Corrective measure: Check the steering cylinders for internal leaks!**

To do this turn the steering wheel as far as possible to press in the steering cylinders and disassemble the return flow hydraulic hoses. Hold the steering wheel to keep the steering cylinders in this position. No oil should escape from screw connection of the hydraulic cylinder. If oil escapes the seal in the steering cylinder is defective. In this case replace the hydraulic cylinder.

If no oil escapes repeat the test in the other steering direction.

**Attention: Reassemble the hydraulic hose beforehand - otherwise oil will escape!**

If no oil escapes in the other steering direction either measure the hydraulic oil pressure using a manometer.

Note: The oil must be warm to complete the pressure test (50- 55°C). Never measure hydraulic oil when it is cold!

The hydraulic oil pressure should be approx. 120 bar when the steering is locked. If the measured value is under 100 bar or the measured value constantly changes, disassemble the flow distributor in the main valve manifold and inspect it for signs of dirt and damage. Clean the flow distributor or replace it in the event of damage.

II. The steering emits noises:

Corrective measure: Check as in the case of a **“The steering is sluggish or jumps when the hydraulic oil is warm”** fault (see Section I).

III. If all the tests have been completed (steering cylinder checked for internal leaks + flow distributor) and there is no sign of improvement change the steering unit.

## 4.0.1 Steering

**Check the steering cylinders for internal leaks (gasket in the cylinder)!**

**Corrective measure: Check the steering cylinders for internal leaks!**

To do this, turn the steering wheel as far as possible to press in the steering cylinders and disassemble the return flow hydraulic hoses. Hold the steering wheel to keep the steering cylinders in this position. No oil should escape from screw connection of the hydraulic cylinder. If oil escapes, the seal in the steering cylinder is defective. In this case, replace the hydraulic cylinder. If no oil escapes, repeat the test in the other steering direction.

