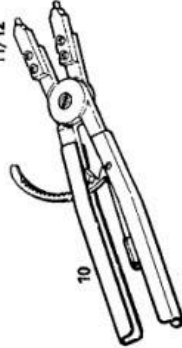
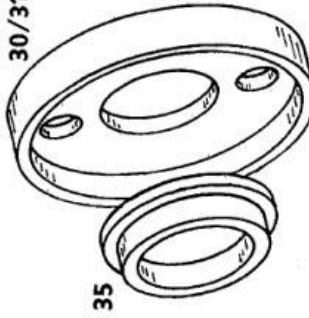

SUBGROUP INDEX

- 1.01.** Chart / Coming into Effect of Modifications
- 1.10.** Safety Information
- 1.19.** Conversion Factors
- 1.20.** Tightening Torques
- 1.50.** Lubrication

Darstellung Representation Dessin	Nr. No. N°	Benennung Description Dénomination	Größe Size Grandeur	Ident Nr Order no N° code	Gerät												Anwendung Application Application
					Model						Type						
					A 900 B	R 900 B	A 904	A 904*	R 904	A 914	R 914	A 924	R 924	A 934	R 944		
	10	Spannzange für Achsen Clamping - pliers for axles Pince à circlips de ponts		7009536	⊗		⊗	⊗		⊗		⊗				Zum Aus- und Einfedern des Sicherungsringes im Planetenantrieb der Achsen To remove or insert snap rings in the planetary drive of the axles Pour le démontage et le montage du circlips sur l'axe des planétaires des ponts	
	11	Zangenspitze Plier tip Pointe de pince	5 mm	8145768	⊗		⊗	⊗		⊗		⊗					
	12		6 mm	8145769	⊗		⊗	⊗		⊗		⊗					
	20	Nutmutter Schlüssel für Achsen Slotted nut wrench for axles Clé pour écrou à créneaux de ponts	AP/APL 755	7013102	⊗											Zum Lösen und Anziehen der Nut- mutter im Planetenantrieb / Achsen To remove or/and tighten of the slotted nut in the planetary drive of the axles Pour le déblocage et le serrage de l'écrou à créneaux sur l'axe des planétaires des ponts	
	21		AP 755 TR	7021789	⊗												
	22		AP 765 APL 765	7014452			⊗	⊗		⊗		⊗					
	23		AP 765 TR	7026768			⊗										
	30	Zentrierscheibe Centering disk Bague de centrage	AP/APL 755 AP 755 TR	7013101	⊗											In Verbindung mit Nr. 20 - 23 To be used with tool no. 20 - 23 A employer avec l'outillage n° 20 - 23 In Verbindung mit Nr. 30 To be used with tool no. 30 A employer avec l'outillage n° 30	
	31		AP/APL 765 APL 765 TR	7013920			⊗	⊗		⊗		⊗					
	35	Zentrierring Centering ring Bague de centrage	AP/APL 755	7024975	⊗												

LIEBHERR

Datum / Edition / Date

09.01

Benennung / Description / Dénomination

Spezialwerkzeuge

Special Tools

Outillages Spéciaux

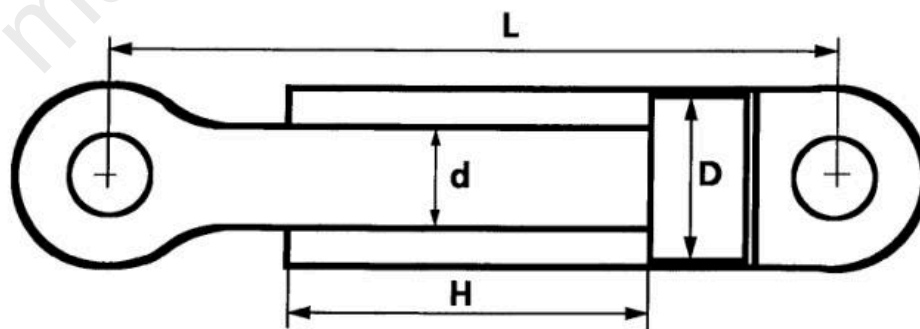
* Industrie - Industry

Blatt Nr. / Page no. / Feuille n°

2.08.03

Cylinders	Ident No, use, ...	Drawing no.	Nbr	D (mm)	d (mm)	H (mm)	L (mm)	Factory Standart 4121, N° XXX
Boom								
S. N 5001 →		29 496 1040	2×	150	95	1195	1810	171
Stick								
S. N 5001 →		29 415 1040	1×	125	85	1160	1690	121
"	Eqt industrie	29 420 2040	2×	140	95	970	1555	171
"		29 421 1140	1×	150	105	1500	2120	201
"		29 421 4040	1×	150	105	1500	2120	201
Bucket tilt								
S. N 5001 →		29 420 7040	1×	140	95	970	1555	171
"		29 424 3040	1×	150	105	1130	1735	201
"		29 441 1040	1×	100	70	895	1410	091
Boom adjustm.								
S. N 5001 →		29 478 1040	1×	180	110	900	1450	231
Tiltable bucket								
S. N 5001 →		29 457 1040	1×	90	50	255	585	075

* The N° XXX of the factory standart 4121 determines the tightening values for cylinder piston and piston nut, see page 7.30.09.



Pressure Holding Valves 107 and 108 (fig.8)

These valves maintain a certain amount of counter-pressure in the return circuit of the valve blocks (to avoid cavitation).

At normal operating temperatures, oil flows back to the hydraulic oil cooler via pressure maintaining valve 108. When the hydraulic oil is cold, counter-pressure in the return circuit increases. Valve 107, set slightly higher, opens and permits the oil to flow back to the tank, in part directly. The hydraulic oil cooler is thus protected from pressure peaks.

Pistons 110.3 and 110.4 in valve 110 can increase the response pressure of valves 107 and 108 for specific working procedures.

Valve 110 for return oil Boom and Stick (fig.8)

Servo pressures at "y1" of valve block 220 (retract boom cylinder) as well as at connection "x2" of valve block 240 (extend stick cylinder) are connected to valve 110 via internal bore holes in support block 100.

When actuating any of the above mentioned movements, switching valve 110.1 is switched via switching valve 110.2. Servo pressure standing by at connection "P3" of support block 100 builds up at the outer surfaces of valves 110.3 and 110.4.

These valves then supply the cones of valves 107 and 108 with force that acts in the same direction as the pretensioned springs in the valves.

The resulting counter-pressure increase in the tank canal of the support block facilitates oil suction at the rod side of the boom cylinder (or at the piston bottom of the stick cylinder). Any cavitation is thus prevented when oil is returned from both sides of the cylinder.

Solenoid valve Y53 for thermostatic regulation of hydraulic oil cooling

serially mounted since machines A 914 n° 6198, R 914 n° 6676, A 924 n° 6367 and R 924 n° 6282.

see fig. 11 et 12 and subgroup 6.68,

Since above mentioned serial numbers, the valve block 110 has been fitted with a regulation solenoid valve Y53 and a two way check valve 110.6 which regulate, depending on the hydraulic oil temperature, the pressure inside piston 110.4 and, by the fact, the counterpressure in holding valve 108, and also the oil flowing through the cooler 6.

As the oil is cold, Y53 connects the piston 104 with the servo control pressure and the opening pressure of holding valve 108 is high. The whole amount of oil flows back to tank via the holding valve 107, the cooler is bypassed.

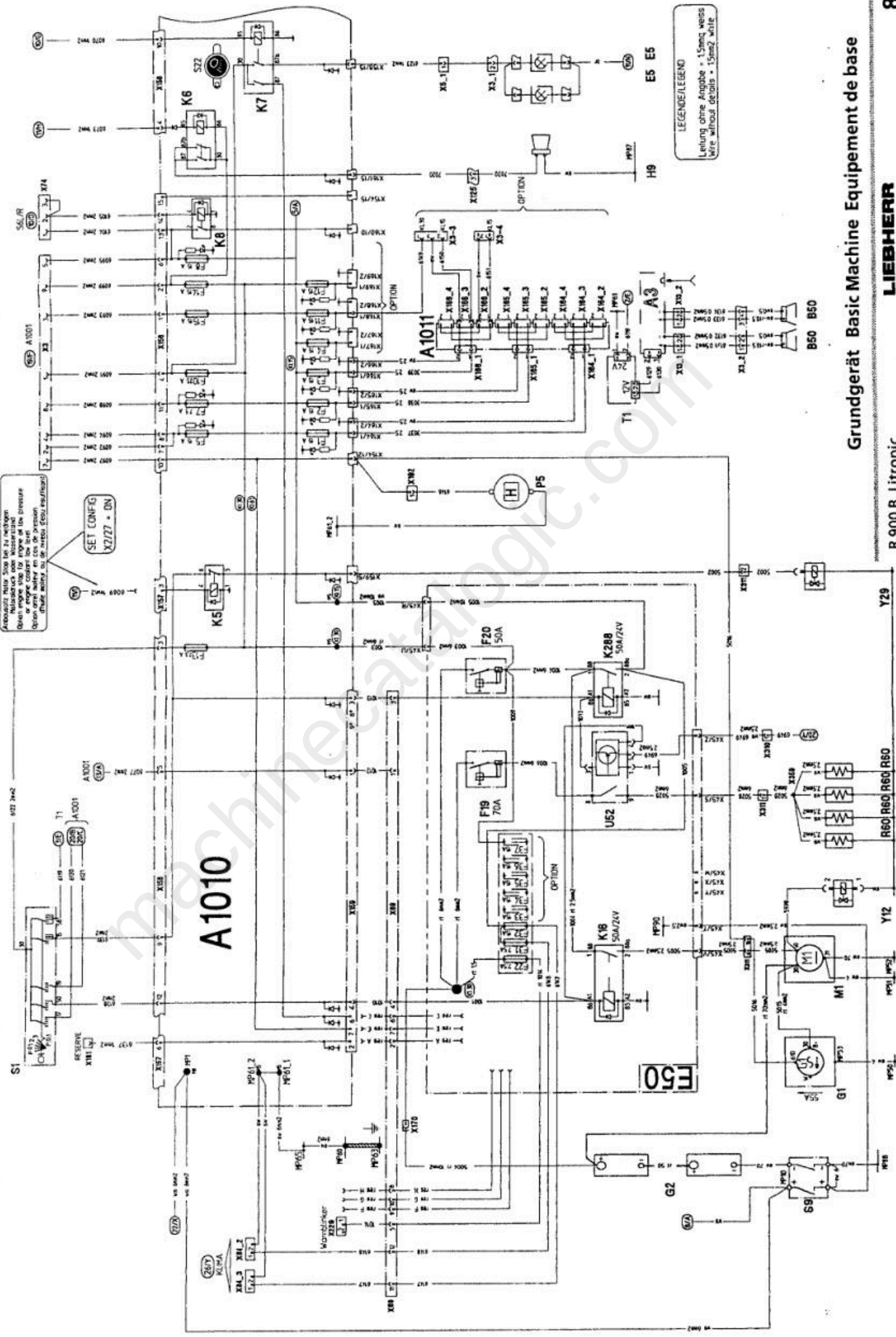
When the oil is hot, Y53 connects the piston 104 with tank pressure, the opening pressure of valve 108 is reduced to approx. 3 bar. All the oil flows back to tank over the cooler 6.

Throttle for Boom Cylinder 115 (fig.4)

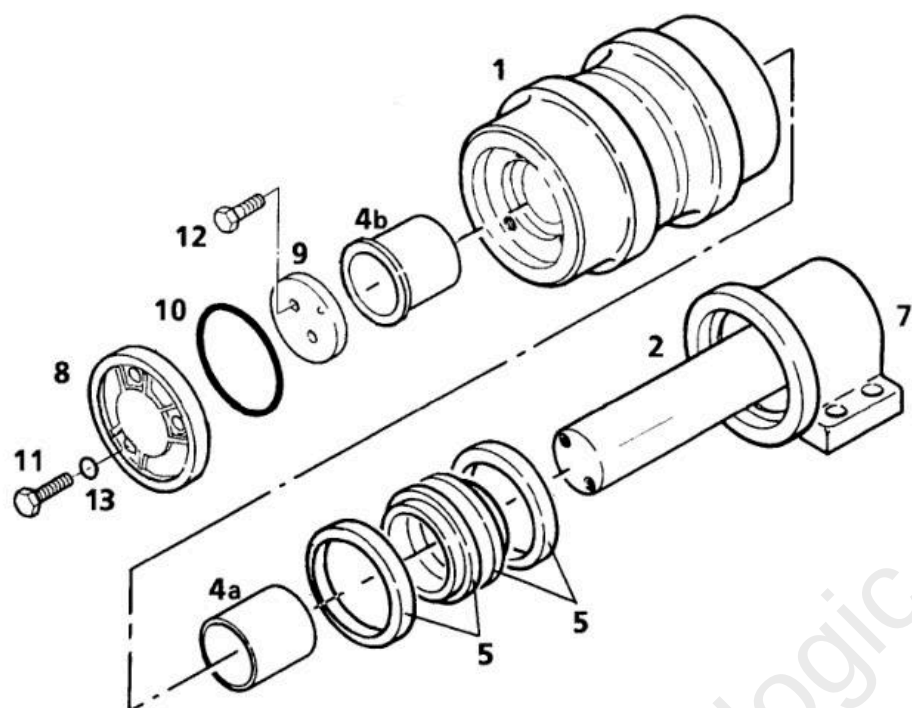
This throttle is mounted at piston bottom on boom cylinders and limits the retraction speed of the boom cylinder.

Throttle for Stick Cylinder 116 (fig.4)

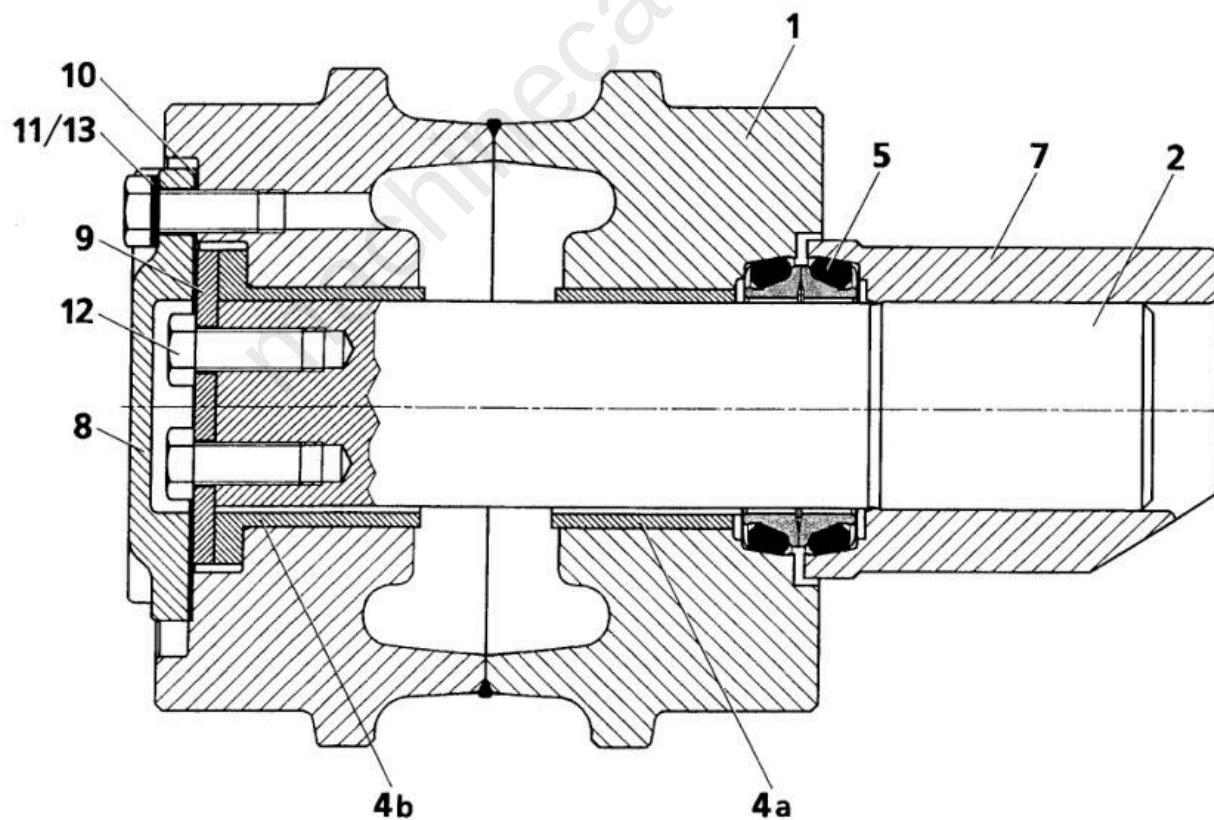
This throttle is mounted at rod side on boom cylinders and limits the extension speed of the stick cylinder.



Carrier roller D7 - Intertrac / 5615338



- 1 Roller body
- 2 Shaft
- 4a Bushing
- 4b Bushing
- 5 Slipping seal
- 7 End part
- 8 Cover
- 9 Disk
- 10 Sealing ring
- 11 Hex head screw
- 12 Hex head screw
- 13 Seal washer
- * Oil SAE 90



Hydraulic Hammer

	Type Stanley					
	MB 875	MB 1950	MB 1975	MB 2950	MB 2975	MB 3950
Weight 1)	495	1000	1100	1840	1910	2290
Oil requirement l / min	83 - 115	100 - 150	100 - 150	130 - 190	130 - 190	190 - 265
Operating pressure / Hammer	125	130	130	140	140	145
Adjustment pressure of excavator bar see ASH, AHS 11, AHS 12	150	150	150	160	160	170
Return flow 2)	left	left	left	left	left	left
Can be installed on:						
A/R 900 B Litronic	⊗					
A/R 904 Litronic	⊗	⊗	⊗			
A/R 914 Litronic	⊗	⊗	⊗			
A/R 924 Litronic				⊗	⊗ 5)	
R 934 Litronic				⊗	⊗	⊗ 6)
R 944 Litronic				⊗	⊗	⊗

Notes :

- 1) incl. standard chisel and suspension
- 2) as seen from operator's seat
- 3) only with bucket stick 2.20 m and 2.70 m
- 4) only with bucket stick 2.40 m and 3.00 m
- 5) only with bucket stick 1.80 m and 2.40 m
- 6) only with bucket stick 2.00 m and 2.50 m
- 7) only with bucket stick 2.10 m and 2.60 m

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