SERVICE MANUAL
NEUSON

WHEELED EXCAVATOR

6502



Symbolpict.

Edition: ***February 03***
Id.No.: ***9707750***

GB

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Abbreviation:

AP	...	Adjustment point
MP	...	Measuring point
PPLV	...	Primary - Pressure limiting valve
SPLV	...	Secundary - Pressure limiting valve (shock valve)
TT	...	Tightening torque
Pb1	...	Position of the port shown at the hydraulic diagram

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Tightening torque for high quality screws

Tightening torque M_A for high quality screw joints

with Standard screw					
Size	Screw with DIN 912, DIN 931, DIN 933, usw.			Screws DIN 7984	
	8.8	10.9	12.9	8.8	10.9
M5	5,5 Nm	8 Nm	10 Nm	5 Nm	7 Nm
M6	10 Nm	14 Nm	17 Nm	8,5 Nm	12 Nm
M8	25 Nm	35 Nm	42 Nm	20 Nm	30 Nm
M10	45 Nm	65 Nm	80 Nm	40 Nm	59 Nm
M12	87 Nm	110 Nm	147 Nm	69 Nm	100 Nm
M14	135 Nm	180 Nm	230 Nm	110 Nm	160 Nm
M16	210 Nm	275 Nm	350 Nm	170 Nm	250 Nm
M18	280 Nm	410 Nm	480 Nm	245 Nm	345 Nm
M20	410 Nm	570 Nm	690 Nm	340 Nm	490 Nm
M22	550 Nm	780 Nm	930 Nm	460 Nm	660 Nm
M24	710 Nm	1000 Nm	1190 Nm	590 Nm	840 Nm
M27	1040 Nm	1480 Nm	1770 Nm	870 Nm	1250 Nm
M30	1420 Nm	2010 Nm	2400 Nm	1200 Nm	1700 Nm

with fine screw					
Size	Screws with DIN 912, DIN 931, DIN 933, usw.			Screws DIN 7984	
	8.8	10.9	12.9	8.8	10.9
M8x1,0	25 Nm	37 Nm	43 Nm	22 Nm	32 Nm
M10x1,0	50 Nm	75 Nm	88 Nm	43 Nm	65 Nm
M10x1,25	49 Nm	71 Nm	83 Nm	42 Nm	62 Nm
M12x1,25	87 Nm	130 Nm	150 Nm	75 Nm	110 Nm
M12x1,5	83 Nm	125 Nm	145 Nm	72 Nm	105 Nm
M14x1,5	135 Nm	200 Nm	235 Nm	120 Nm	175 Nm
M16x1,5	210 Nm	310 Nm	360 Nm	180 Nm	265 Nm
M18x1,5	315 Nm	450 Nm	530 Nm	270 Nm	385 Nm
M20x1,5	440 Nm	630 Nm	730 Nm	375 Nm	530 Nm
M22x1,5	590 Nm	840 Nm	980 Nm	500 Nm	710 Nm
M24x2,0	740 Nm	1070 Nm	1250 Nm	630 Nm	900 Nm
M27x2,0	1100 Nm	1550 Nm	1800 Nm	920 Nm	1300 Nm
M30x2,0	1500 Nm	2150 Nm	2500 Nm	1300 Nm	1850 Nm

DIN 912

Allen Werten liegt ein Reibungskoeffizient von μ = 0,1 2 zugrunde und sind als Richtwerte anzuwenden.

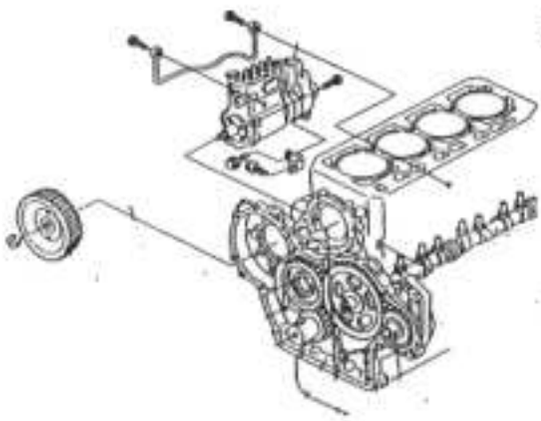
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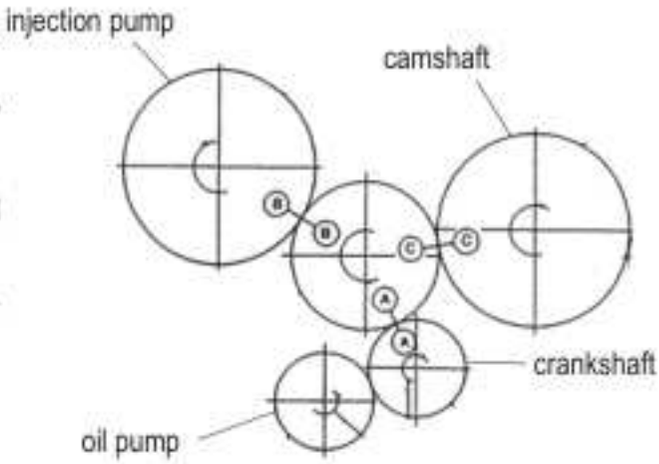
Injection Pump

> Dismantling / installation:

The injection pump is driven directly via spur wheels from the crankshaft.
Prior to dismantling the pump dismantle the spur wheel.

Take care to align the relevant markers of the spur wheels correctly! (see schematic)



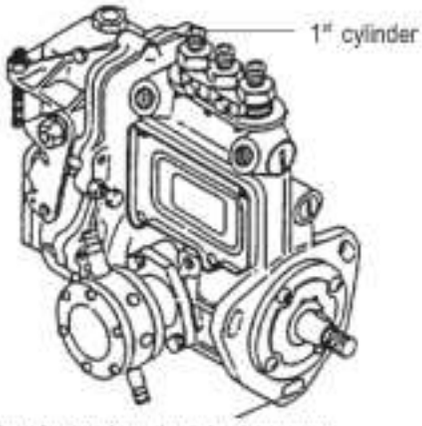


Moment of Injection

> Direct injection:

1. Dismantle injection pipe for 1st cylinder.
   Cylinders are always numbered starting from the flywheel side.
2. Turn engine clockwise (from the water-cooler point of view) at the crankshaft, until fuel emerges from the bottom valve of the injection pump.
3. Remove rubber cover at the flywheel case and read moment of injection by the markers at the flywheel and flywheel case.
4. If the markers don't correspond, the moment of injection must be corrected by turning the injection pump.

   Moment of injection too late: turn pump away from engine
   Moment of injection too early: turn pump towards engine



longitudinal slots for turning the injection pump

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Legend hydraulic diagram 5108311 / 5108319

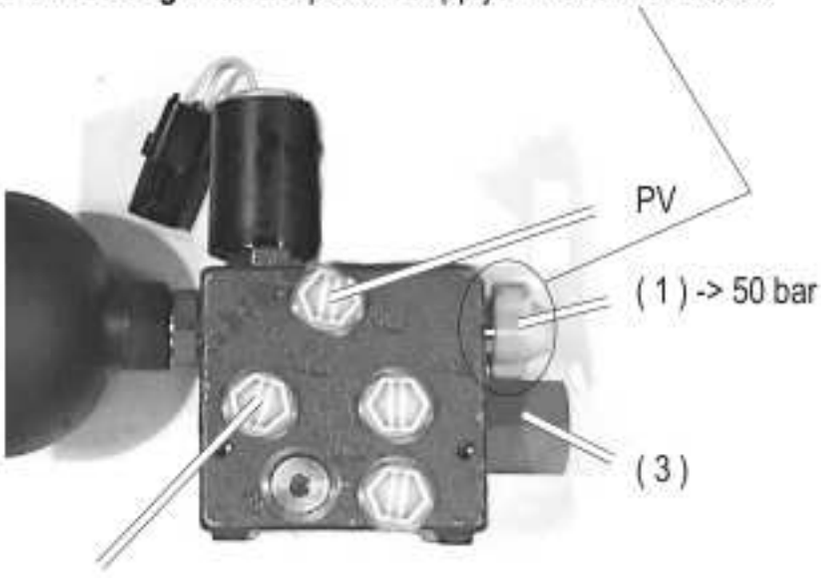
port P1: >> gear pump **P3**
port P2: >> variable displacement pump **P1**
port P3: >> variable displacement pump **P2**
port T : >> tank
port **A** : >> **drive counterbalancing system** (main valve block)
port **PV**: >> supply of piston of the swivel motor parking brake.
supply of floating axle and drive motor parking brake system

Pilot oil supply unit **5108311**:		Pilot oil supply unit **5108319**:
port **BV**:	>> not active <<	Port **PR**
port **PR**:	>> safety solenoid valve <<	Port **BV**

pilot control valves (joystick,..) controlled by the **sensitive micro-switch in the left arm rest** (WK2).
directional control valve - 2nd driving speed (pos. uppercarriage frame right)

(1) ... safety pressure valve 50 bar - protects the control oil unit in case of defective pressure reducing valve
(2) ... shuttle valves - always accept the highest pump pressure for control oil pressure
(3) ... pressure reducing valve (PRV) pilot control pressure - **ADJUSTMENT POINT** (AP)
(4) ... accumulator

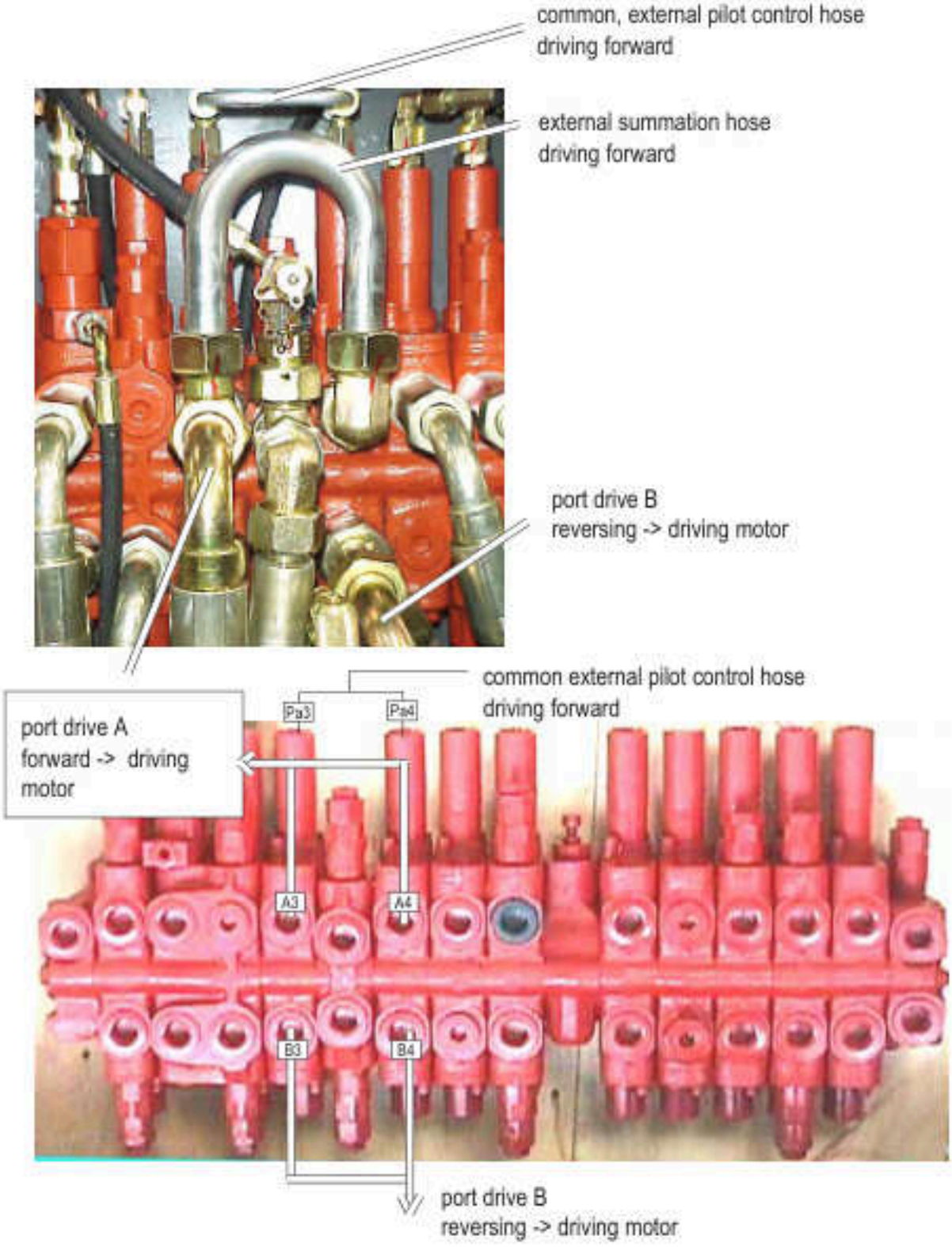
Fig.: **Port assignment** of pilot oil supply unit **5108311** - 6502



PR (safety solenoid valve)

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Fig.: Summation driving section 1 + 2 - 6502



> **Suction valves** (section driving 1) :
The suction valves of section driving 1 are installed to support the summation function during driving.

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Fig.: Position of **primary pressure limiting valves** (PPLV 1 - 3) - main valve block (example Neuson 6002 - see chapter Hydraulic System)

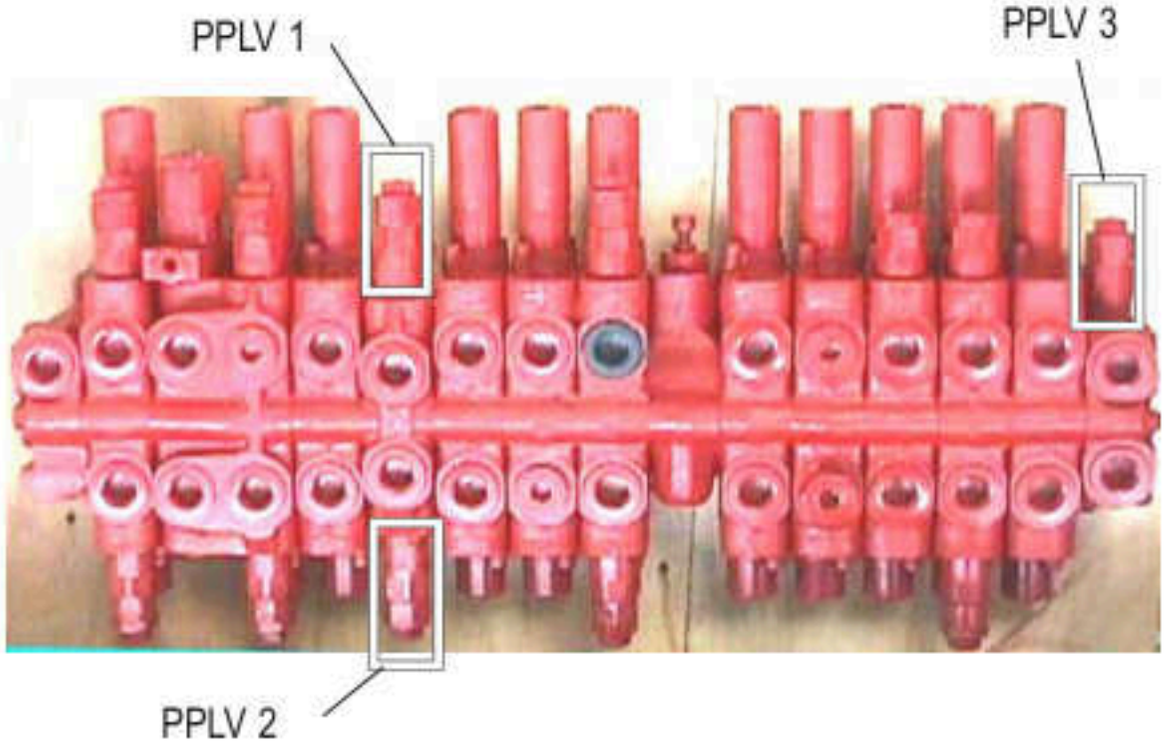


Fig.: Position of **secondary pressure limiting valves** (SPLV) - swivel unit



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