Service Manual

Compact excavator

12002



Machine model	**12002**
Edition	**1.1**
Language	**English**
Item no.	**1000081437**

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Abvreviations:

AP	...	Adjustment point
MP	...	Measuring point
PPLV	...	Primary pressure limiting valve
SPLV	...	Secondary pressure limiting valve
TT	...	Tightening torque
Pb1	...	Port code from the hydraulic diagram

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Type relativ tightening torques
for high quality screw joints

Tightening torque M_A for Screw joints at Neuson 5002 - 12002

	5002 RD		6002 RD		6502 WD		8002 RD		12002 RD	
Turn table	M14 10.9	180 Nm*	M16 10.9	275 Nm*	M16 10.9	275 Nm*	M16 10.9	275 Nm*	M18 10.9	395 Nm*
	M16 10.9	275 Nm*								
Track roller	M16 10.9	275 Nm*	M16 10.9	275 Nm*			M12 10.9	110 Nm*	M16 12.9	358 Nm*
Swivel joint	M10 10.9	64 Nm*	M10 10.9	64 Nm*	M10 10.9	64 Nm*	M10 10.9	64 Nm*	M10 10.9	64 Nm*
Sprocket	M14 10.9	180 Nm*	M14 10.9	180 Nm*			M14 10.9	180 Nm*	M16 10.9	275 Nm*
Drive unit	M14 10.9	180 Nm*	M14 10.9	180 Nm*	M8 10.9	35,3 Nm*	M16 10.9	275 Nm*	M16 10.9	275 Nm*
Swivel unit	M12 10.9	110 Nm*	M12 10.9	110 Nm*	M12 10.9	110 Nm*	M12 10.9	110 Nm*	M14 12.9	220 Nm*
Cab fixing screws	M10 8.8	45 Nm	M10 8.8	45 Nm	M10 8.8	45 Nm	M10 8.8	45 Nm	M10 8.8	45 Nm
	M12 8.8	87 Nm	M12 8.8	87 Nm	M12 8.8	87 Nm	M12 8.8	87 Nm	M12 8.8	87 Nm
Engine carrier	M10 8.8	45 Nm	M10 8.8	45 Nm	M10 8.8	45 Nm	M10 8.8	45 Nm	M10 8.8	45 Nm
Engine carrier	M10 10.9	64 Nm	M12 10.9	110 Nm	M12 10.9	110 Nm	M12 10.9	110 Nm	M12 10.9	110 Nm
	M8 8.8	25,5 Nm	M10 8.8	45 Nm	M10 8.8	45 Nm	M10 8.8	45 Nm	M10 8.8	45 Nm
Pump carrier	M10 10.9	64 Nm	M10 10.9	64 Nm	M10 10.9	64 Nm	M10 10.9	64 Nm	M10 10.9	64 Nm
Pump	M12 10.9	87 Nm	M16 10.9	275 Nm	M16 10.9	275 Nm	M10 10.9	64 Nm	M16 10.9	275 Nm

*) Alle mit * gekennzeichneten Verbindungen, müssen mit Loctite S2420 oder VaryBond 12-43 eingeklebt werden.

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Legend Hydraulic diagram 12002 (1111067)

1 Diesel engine
2 Variable + gear pump
3 Pilot oil supply unit
4 Joystick left (dipper stick / swivel motor)
5 Joystick right (bucket / boom)
6 Pilot control valve function drive
7 Pilot control valve function boom offset / triple boom
8 Pilot control valve function dozer blade
9 Switch valve function boom offset / triple boom
10 Main valve block
11 Second valve block
12 Drive unit
13 Swivel unit
14 Boom cylinder
15 Dipper stick cylinder
16 Bucket cylinder
17 Dozer blade cylinder
18 Boom offset cylinder
19 Load lowering valve
20 Load holding security valve - load lowering valve boom (Option)
21 Load holding security valve - load lowering valve dipper stick (Option)
22 Shuttle valve block
23 Oil cooler
24 Hydraulic oil return filter
25 Leckage oil filter
26 Check valve
27 Triple boom cylinder
28 Switch valve auxiliary hydraulics electr. controlled
29 Load lowering valve triple boom cylinder
30 Vario lock cylinder
31 4/2 Way valve function vario (joystick controlled)
32 Pressure limiting valve

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Assembly of e1 logic control and logic valve:

a. Tighten hexagon socket head bolts to their specified torque.
Tools: Spanner 27mm, Tightening torque 24.5 ~ 29.4 Nm

Assembly of main relief, port relief and swing priority valves:

a. Install main relief valve (601), port relief valves (602) and swing priority valve (604) cartridges into the casing and tighten to the specified torque.

Component	Tools	Tightening Torque (Nm)
Main relief valve	Spanner 32mm	68.6 ~ 78.4
Port relief valve	Socket wrench 32mm	68.6 ~ 78.4
Swing priority valve	Socket wrench 32mm	68.6 ~ 78.4

Assembly of straight travel spool:

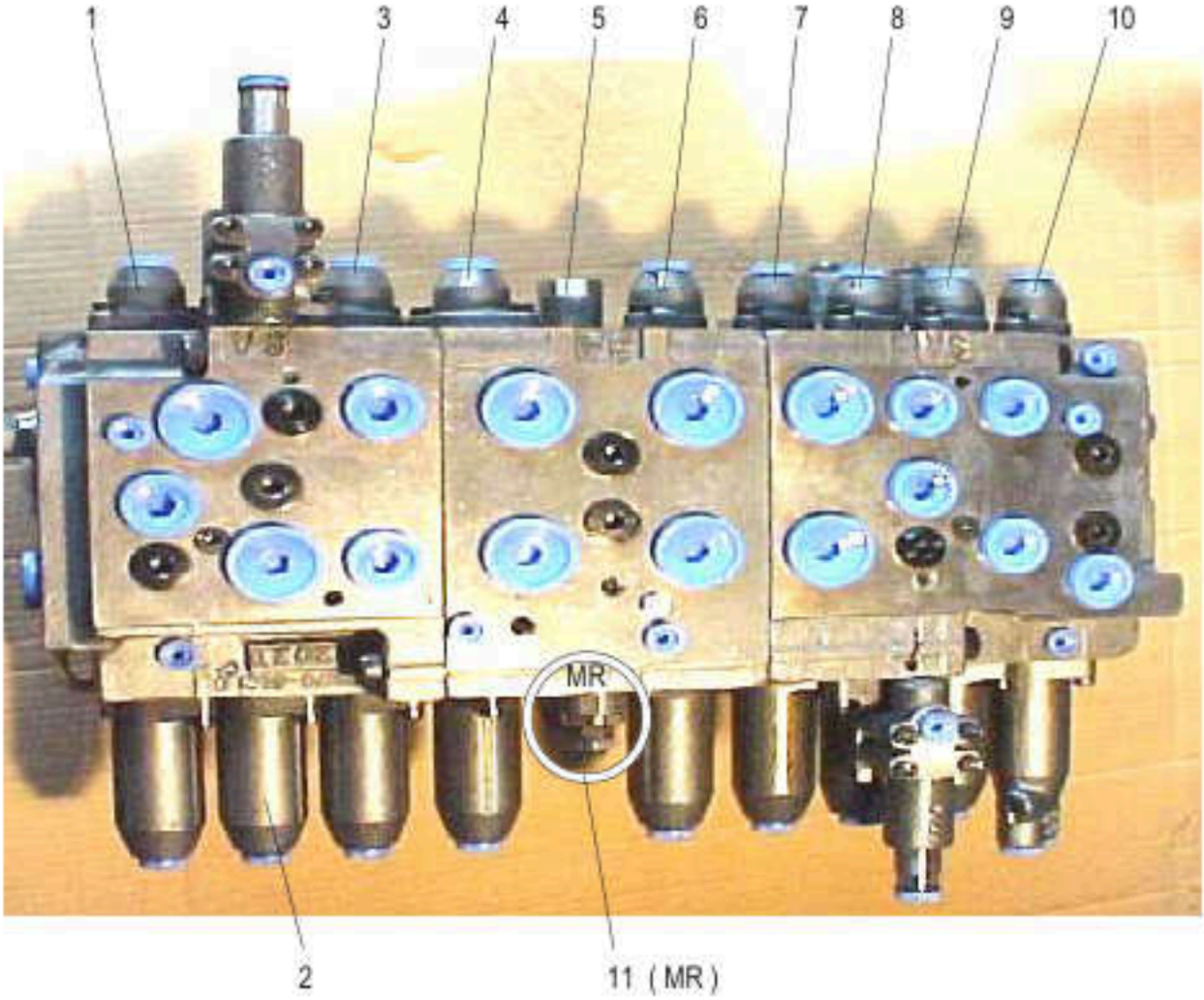
a. Insert the straight travel spool assembly (305) into Casing TRAVEL (101).
b. Assemble springs (324), (325) and rod (337).
c. Put O-ring (265) onto plug (252) and tighten the latter to its specified torque.

Tools: Socket wrench 32mm, Tightening torque 68.6 ~ 78.4 Nm

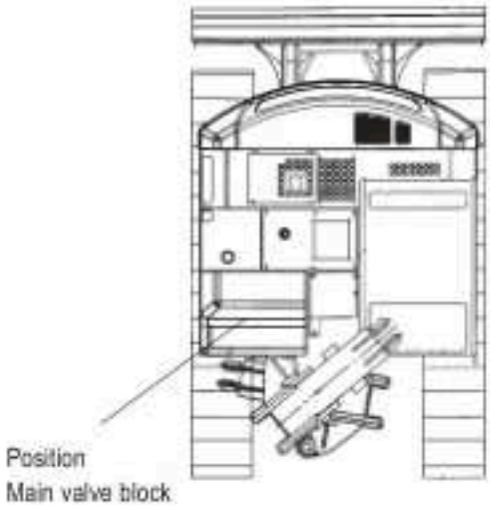
Caution: Fit the spool assembly into the Casing TRAVEL (101) carefully and slowly so as to avoid damage.
Do not under any circumstances use force to effect assembly.

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Section description

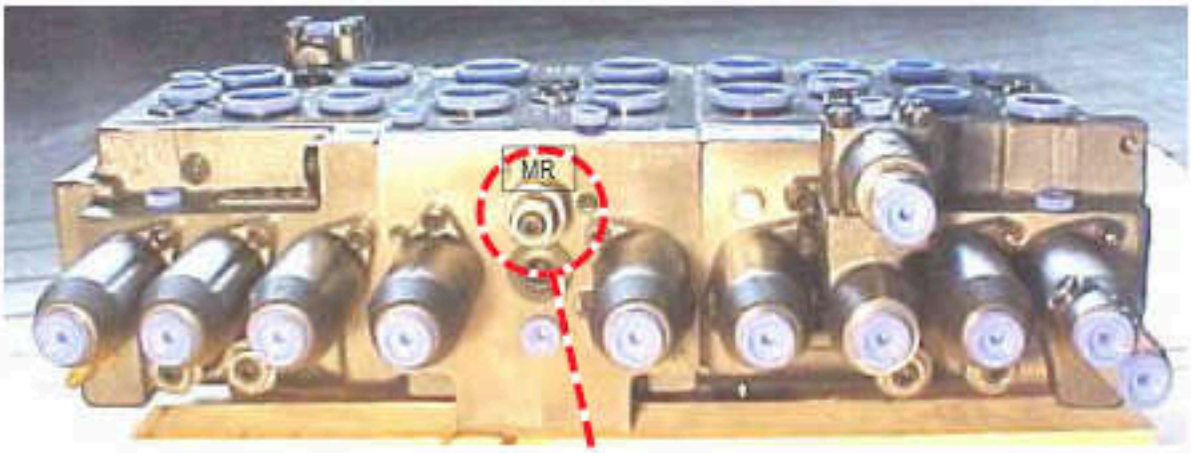


1	Section Boom 2 (summation)
2	Section Dipper stick
3	Section Swivel motor
4	Section Drive right
5	Section Drive counter balancing
6	Section Drive left
7	Section Auxiliary hydraulics
8	Section Boom
9	Section Bucket
10	Section Dipper stick 2 (summation)
11	Main pressure limiting valve (MR)



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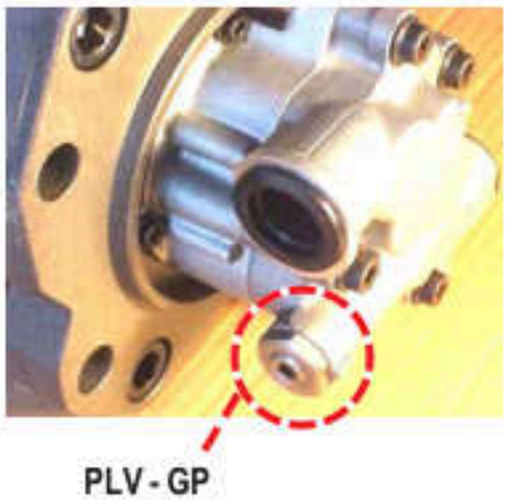
Pict.: Position of the main pressure limiting valve (MR) at the main valve block:



Pict.: Position of the primary-pressure limit. valve-2 (side valve block) :



Pos.: Position of the pressure limit. valve at the gear pump (pilot pressure)



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