COMPANY

neuson kramer

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Baumaschinen GmbH

PRODUCT HISTORY

This overall lists the main technical modifications of the excavator types

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Servicing activity component	every 10 h (daily)	every 50 h (weekly)	every 250 h (6 months)	every 500 h (12 months)	every 1000 h (18 months)	annual
HEATING						
Function		O				
Leakage (cooling and heating circuit)		O				
Seals		O				
Fan		O				
WORKING EQUIPMENT						
Lubricate lubricating points	O	O				
Bucket teeth (fastening and wear)	O					
Pin fastening	O					
Line fastenings	O					
Piston rods	O					
Behaviour of hydraulic cylinder under load	O					
Bush bearing play					O	
Bearing play			O			
GENERAL						
Operating elements	O					
Hydraulic fittings	O					
Bolts	O					
Lights	O					
Windscreen washing system		O				
Leakage check - visual check	O					

O - Check
X - Clean
<> - Change/Replace
<> (1) - Change/Replace the first time

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2. HYDRAULIC SYSTEM

Pressure Test Neuson **1503 / 1903 / 2203** .

2.6 Pressure Test of Variable Displacement Pump P1

Functions: **boom, bucket, driving right**

2.6.1 Check of **setting PPLV 1**:

a) Apply pressure gauge at **measuring port MP 1.**
b) Move **boom cylinder** at bottom side to stop at max. diesel engine speed.
c) Check and note pressure.

2.6.2 Check **pressure drop**:

d) Move boom cylinder at bottom side to stop at max. diesel engine speed (item b !).
e) **Reduce** diesel engine speed **swiftly from max. to min speed -** check and note **pressure drop.** The pressure drop should not exceed more than 10% of the setting. (Approximate value - only applicable to primary pressure limiting valves!) An excessive pressure drop might indicate leakage!

f) Check the setting and pressure drop of function **boom rod side**, bucket bottom side / rod side, driving right forward / reverse as described in items 2.2.1 and 2.2.2.

g) If any settings deviate from factory settings please set the correct pressure at the primary pressure limiting valve (PPLV 1) at the main valve block and repeat items a - f.

h) An excessive pressure drop might indicate leakage (e.g.: def. O-ring in secondary valve,..)

2.7 Pressure Test of Variable Displacement Pump 2

Functions: **dipper stick, driving left, auxiliary hydraulics**

2.7.1 Check of **setting PPLV 2**:

i) Apply pressure gauge at **measuring port MP 2.**
j) Move **dipper stick** at bottom side to stop at max. diesel engine speed.
k) Check and note pressure.

2.7.2 Check of **pressure drop** :

m) Check and note pressure drop of indvidual functions analogous to items d - g.
n) Check the settings and pressure drop of functions dipper stick rod side and driving right analogous to items 2.3.1 - 2.3.2 and note the result.

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B.1 Maintenance plan 3 TNE68, 3 TNE 74, 3 TNV 76 (overview)

Work description

For service and maintenance work on the implement, please refer to the operation and maintenance manual of the implement manufacturer as well.

	Maintenance plan/service hours (s/h)							
	Maintenance work (once a day)	Every 50 s/h	Every 250 s/h	Every 500 s/h	Every 1000 s/h once a year	Every 1500 s/h	Customer	Authorised workshop
Fluid and filter changes ( ):								
Carry out the following oil and filter changes (check oil levels after test run):								
• Engine oil [1]		●	●					●
• Engine oil filter [2]		●	●					●
• Fuel filter [3]		●		●				●
• Air filter element as indicated by telltale							●	
• Coolant					●			●
• Hydraulic oil filter insert [4]		●		●				●
• Hydraulic oil				●				●
• Breather – hydraulic oil tank					●			●
• Gearbox oil[5]		●			●			●
Inspection work ( ):								
Check the following material. Refill if necessary:								
• Engine oil	●						●	
• Engine coolant	●						●	
• Hydraulic oil	●						●	
• Gearbox oil[6]		●					●	
Clean water ducts[7]					●			●
Check engine/hydraulic oil radiator and air conditioning for contamination. Clean if necessary	●						●	
Check cooling systems, heating and hoses for leakages and pressure (visual check)	●						●	
Replace cab filter for heating and air conditioning				●				●
Air filter (damage)	●						●	
Prefilter with water separator: drain water	●						●	
• Clean				●				●

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1. Hydraulic Diagram :

Legend - hydraulic diagram **1403**

1 diesel engine
2 triple gear pump
3 pilot oil supply unit
4 joystick left / right (pilot control valve)
5 pilot control valve - drive
6 main valve block
7 dozer blade valve
10 switch vlave
11 hose burst protection valve
12 oil cooler
13 hydraulic oil return filter
14 ball-type stop valve
15 swivel unit
16 drive unit
18 boom offset cylinder
19 dipper stick cylinder
20 boom cylinder
21 bucket cylinder
22 dozer blade cylinder
26 non-return valve
27 throttle valve
28 check valve - boom offset cylinder (Fabr.No.: AC01800 and higher)

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14. CHECKVALVES

TILT CYLINDER - 2203 ONLY

Type: Neuson 2208032 - pilot-controlled double check valve

Function: Leakage of switch valve doesn't permit blocked position of tilt cylinder

Series : Fabr.No.: AC02074 and higher

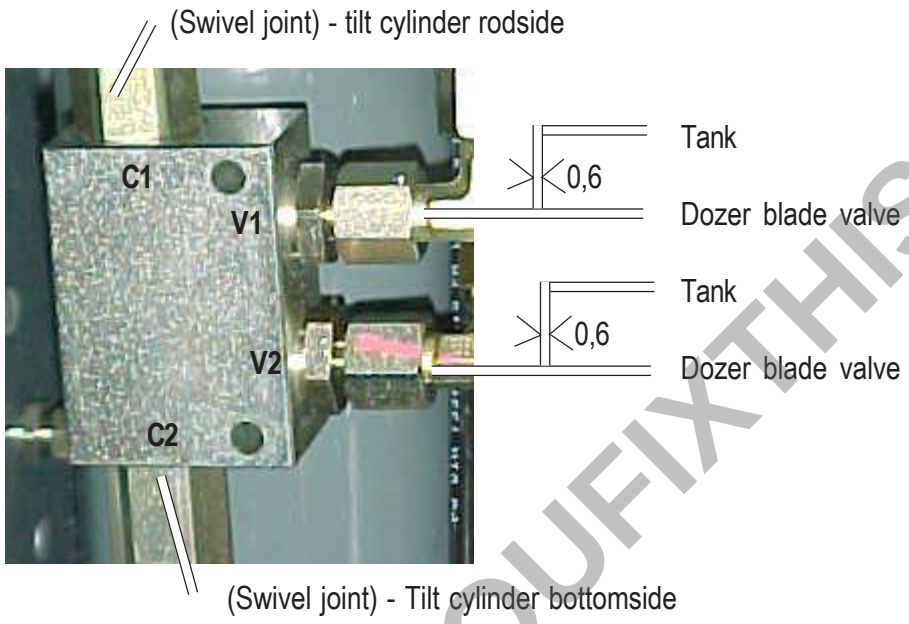

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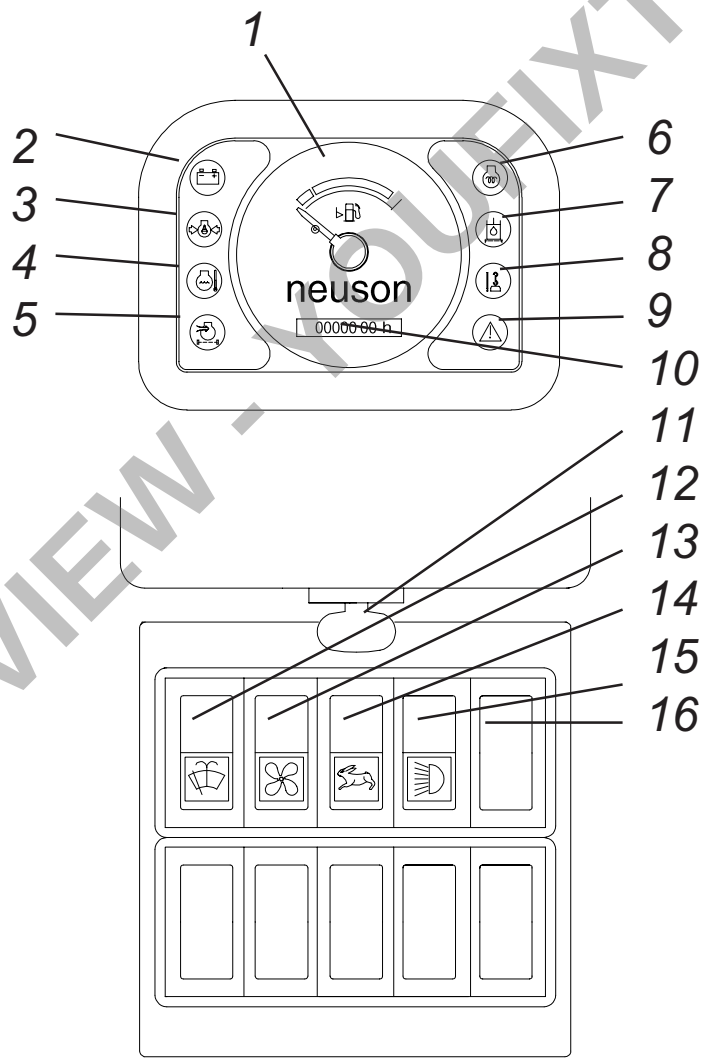
Fig.: **Functions at dashboard**

1 fuel gauge
2 charge control
3 motor oil pressure
4 water temperature pilot lamp
5 clogging indicator for air filter
6 preheating pilot lamp
7 clogging indicator for hydraulic filter
8 overload warning control
9 headlight control
10 operating hours meter
11 ignition lock
12 switch for windscreen wiper and washer
13 switch for cabin lighting
14 fast motion
15 switch for working headlights
16 not occupied



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PRODUKTENTWICKLUNG

Neuson **1903**

Step	Excavator code	Fabr.No.:	Modification / Part group
Production start	Neuson **1903**	AB00440	
Modification	Neuson 1903	AB00440	- Cabin handles (SNews 57) - Joystick console opening angle - Fuel- and air filter position - Dozer blade lever
	Neuson 1903	AC00985	- New oil tank breather (SNews 67)
	Neuson 1903	AC01800	- Check valve / boom offset cylinder (SNews 72)
	Neuson 1903	AC01876	- Joystick console (IV) short (News72)
	Neuson 1903	AC01876	- Joystick console (IV) hardening cover (SNews 74/02)

Neuson **2203**

Step	Excavator code	Fabr.No.:	Modification / Part group
Production start	Neuson **2203**	AB00440	
Modification	Neuson 2203	AB00440	- Cabin handles (SNews 57) - Joystick console opening angle - Fuel- and air filter position - Dozer blade lever
	Neuson 2203	AC00304	- Diesel engine 3TNE74 (SNews 58)
	Neuson 2203	AC00985	- New oil tank breather (SNews 67)
	Neuson 2203	AC01800	- Check valve / boom offset cylinder (SNews 72)
	Neuson 2203	AC01876	- Joystick console (IV) short (News72)
	Neuson 2203	AC01876	- Joystick console (IV) hardening cover (SNews 74/02)
	Neuson 2203	AC02074	- Check valves tilt cylinder

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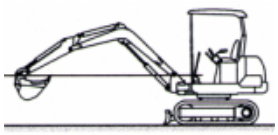
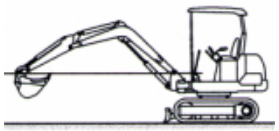
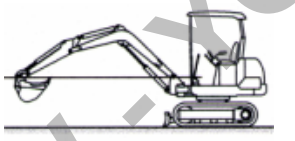
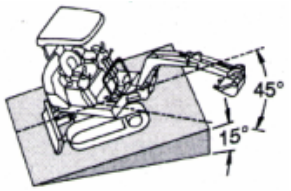
Machine model				Neuson **1903**		Neuson **2203**	
Classifi-cation	Item	Check conditions	Unit	Value		Value	
				normal	allow ed	normal	allow ed
UPPER FRAME ROTATION	Braking angle	Max. extension of the equipment, w ithout load  > Engine speed: Max. > Hydraulic oil temperature: 45 - 55 °C > Mark the outer rings of the thrust bearings w ith centering notches. Make the upper frame rotate of 360° and then release the hand grip. Measure the distance betw een the notches after the stop.	degrees		---		---
	Time required to start the rotation	Max. extension of the equipment, w ithout load  90° > Engine speed: Max. > Hydraulic oil temperature: 45 - 55 °C > Calculate the time required for 90° and 180° rotations after the control has been operated.	sec.		---		---
		180°			---		---
	Time required for the rotation	Max. extension of the equipment, w ithout load  > Engine speed: Max. > Hydraulic oil temperature: 45 - 55 °C > Calculate the time required to perform 5 turns after a first settling turn.			---		---
	Sw ing gearmotor hydraulic drift	Position for the check  > Engine off > Hydraulic oil temperature: 45 - 55 °C > Stop the machine on a 15° plane w ith the boom at 45° w ith respect to the axis of the track frame. > Mark the position betw een the upper and track frame on the thrust bearing. > Measure the shift after 15 minutes. > Max. outreach > Weight in the bucket:	degrees			

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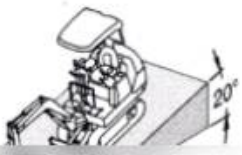
Machine model				Neuson **1403**		Neuson **1503**	
Classifi-cation	Item	Check conditions	Unit	Value		Value	
				normal	allowed	normal	allowed
	Travel motor	Position for the check 					

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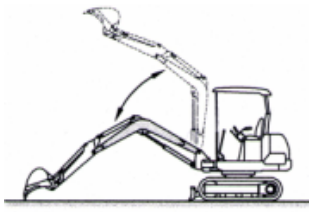
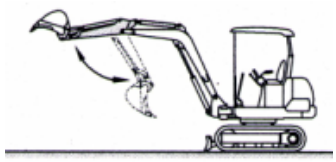
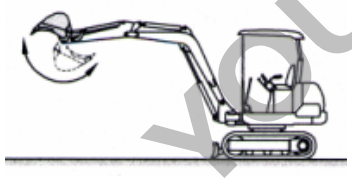
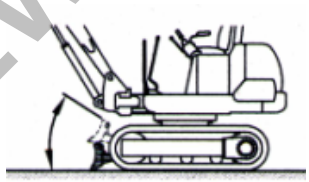
Machine model				Unit	Neuson **1403** Value		Neuson **1503** Value	
Classification	Item	Check conditions			normal	allowed	normal	allowed
WORK EQUIPMENT (**Speed**)	**Boom** Bucket teeth onto the ground ⇕ Cylinder completely extended	Position for the check **without load**  > Engine speed: Max. > Hydraulic oil temperature: 45 - 55 °C	RAISING	sec.		---		---
			LOWERING			---		---
	Dipper stick Cylinder completely retracted ⇕ Cylinder completely extended	Position for the check **without load**  > Engine speed: Max. > Hydraulic oil temperatur: 45 - 55 °C	IN	sec.		---		---
			OUT			---		---
	Bucket Cylinder completely retracted ⇕ Cylinder completely extended	Position for the check **without load**  > Engine speed: Max. > Hydraulic oil temperature: 45 - 55 °C	LOADING	sec.		---		---
			DUMPING			---		---
	Dozer blade Blade onto the ground ⇕ Blade raised at the max. height	Position for the check  > Engine speed: Max. > Hydraulic oil temperature: 45 - 55 °C	RAISING	sec.		---		---
			LOWERING			---		---
	Boom offset swing Cylinder completely retracted ⇕ Cylinder completely extended	Position for the check  > Engine speed: Max. > Hydraulic oil temperature: 45 - 55 °C	RIGHT	sec.		---		---
			LEFT			---		---

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