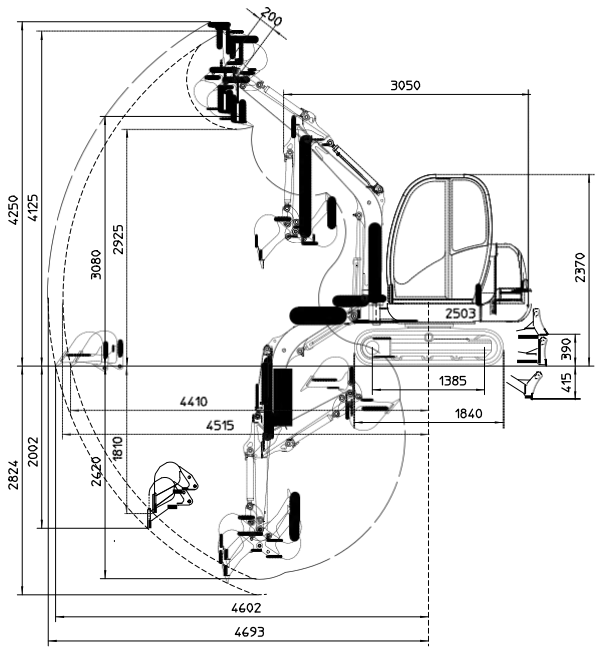
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A.1 Dimensions model 2503



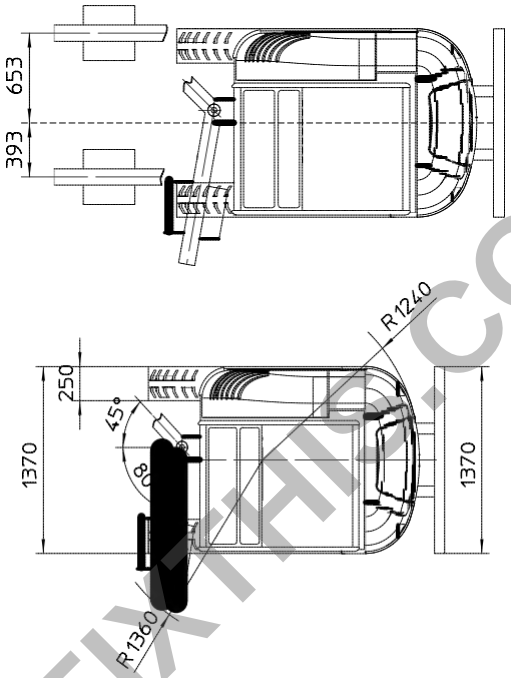


Fig. 1: Machine dimensions (model 2503)

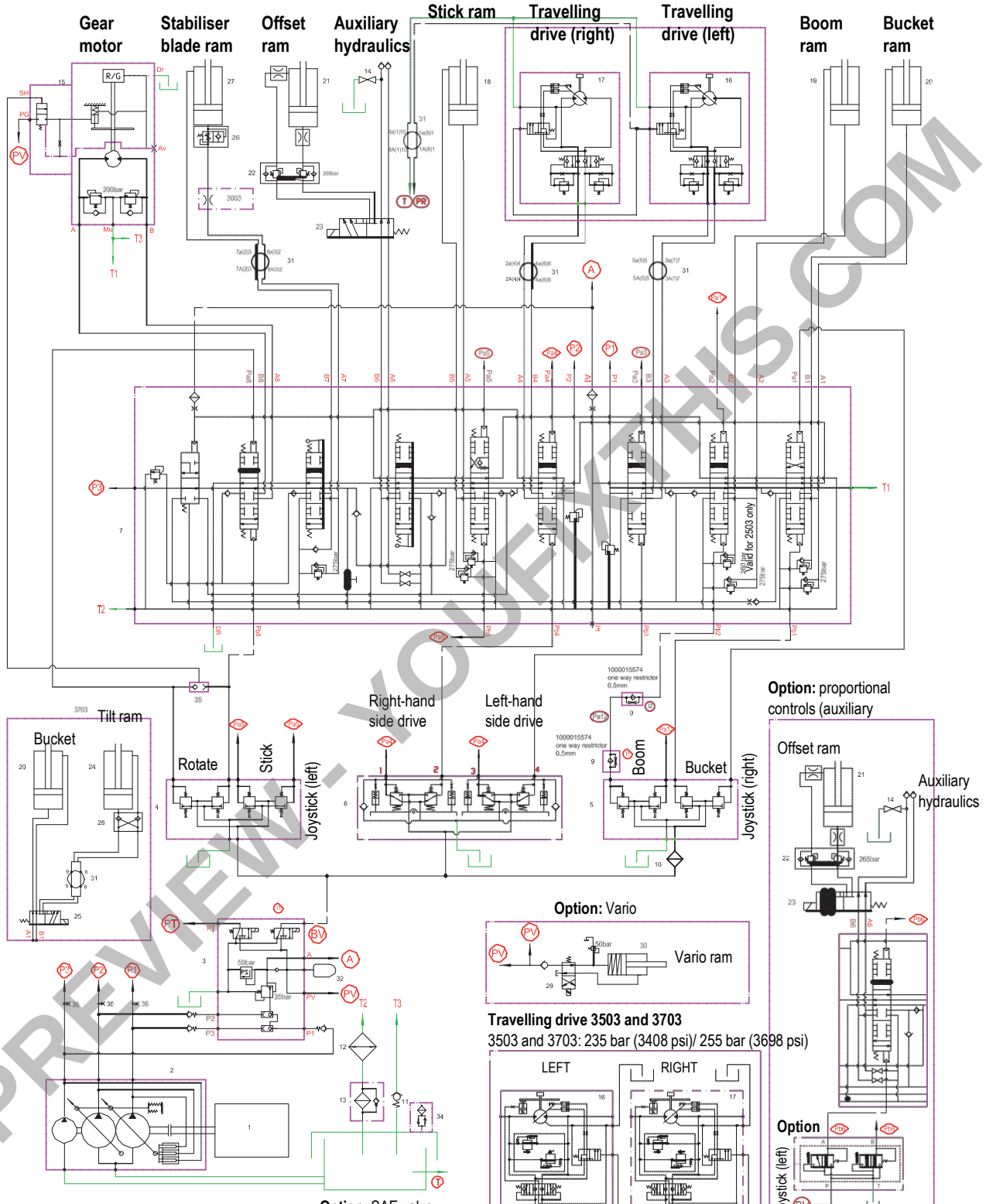
Main data	Model 2503
Service weight with cab/canopy	2620 / 2525 kg 5776 / 5567 lbs
Height	2370 mm / 7'9"
Width	1370 mm / 4'6"
Transport length	4410 mm / 14'6"
Max. digging depth	2620 mm / 8'7"
Stick length (standard)	mm
Stick length (long version)	mm
Max. digging depth for long stick (+ 300 mm/11.8")	2825 mm / 9'3"
Max. vertical digging depth	1810 mm / 5'11"
Max. vertical digging depth (long stick)	2000 mm / 6'7"
Max. digging height	4125 mm / 13'6"
Max. digging height (long stick)	4250 mm / 13'11"
Max. dump height	2925 mm / 9'7"
Max. dump height (long stick)	3080 mm / 10'1"
Max. digging radius	4515 mm / 14'10"
Max. digging radius (long stick)	4693 mm / 15'5"
Max. reach at ground level	4410 mm / 14'6"
Max. reach at ground level (long stick)	4602 mm / 15'1"
Max. breakout force at bucket tooth	20 kN / 4496 lbf
Max. tearout force (standard stick)	13 kN / 2923 lbf
Max. tearout force (long stick)	kN
Min. tail end slewing radius	1240 mm / 4'1"
Max. tail end lateral projection (90° rotation of upper carriage)	mm
Max. boom displacement to bucket centre (right-hand side)	653 mm / 2'2"
Max. boom displacement to bucket centre (left-hand side)	393 mm / 1'3"

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C.1 Hydraulics diagram A4



I1...When changing controls ISO => SAE
I2...Not required when changing controls ISO => SAE

bar	psi	bar	psi	bar	psi
275	3989	240	3481	200	2901
265	3844	235	3408	50	725
255	3698	225	3263	35	508
245	3553	210	3046		

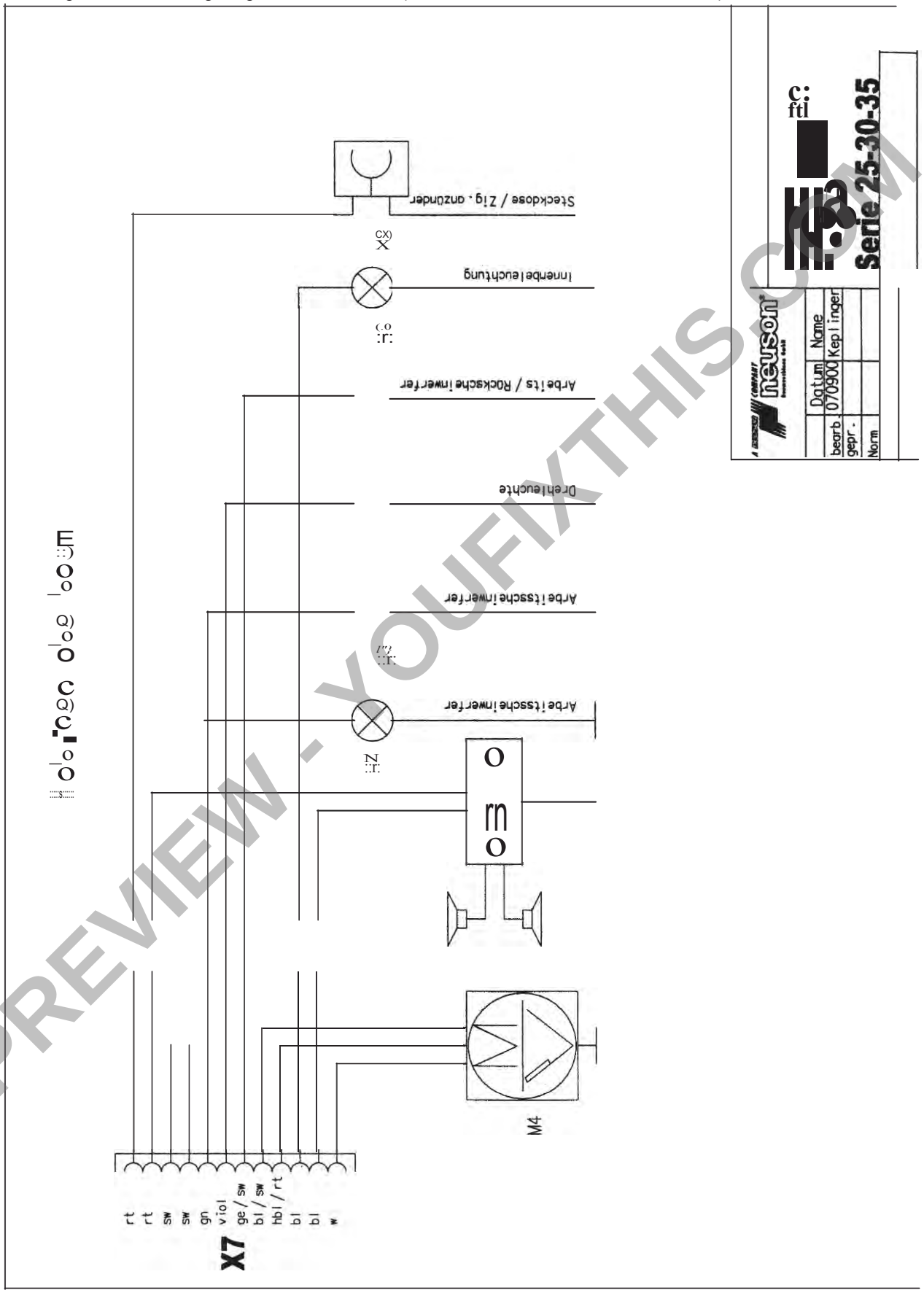
	P1		P2		P3		n
	bar/psi	l/min / gpm	bar/psi	l/min / gpm	bar/psi	l/min / gpm	rpm
2503	240/3481	28.8/7.6	240/3481	28.8/7.6	210/3046	19.2/5.1	2200
3003	225/3263	35.8/9.5	225/3263	35.8/9.5	210/3046	25.7/6.8	2450
3503 3703	240/3481	44.5/11.8	240/3481	44.5/11.8	210/3046	25.1/6.6	2450

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Fig.: Electric wiring diagram 2503- 3703 (valid: Fabr.No.: AB00001 - AC09999)

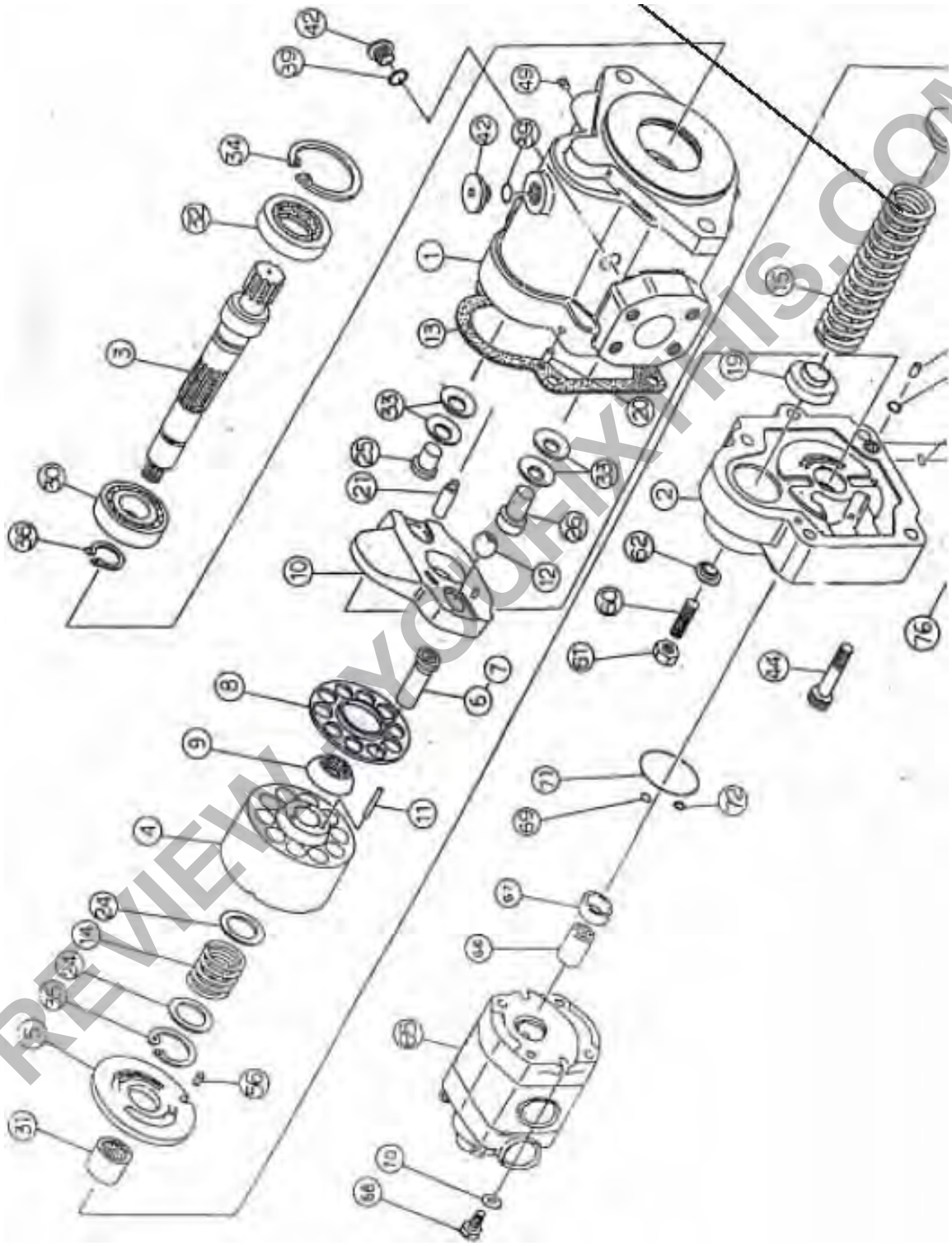


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Fig. Exploded view -double axial and gear pump 2503
Feature 1 governing spring -linear pump regulation



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Tightening torque

for hydraulic joints and dry assembling

Metric hose joints for hydraulic assembling

Light version (DKOL)				
DN	RA	Screw	Tool	Torque
05	6L	M12x1,5	SW 14	15 Nm
06	8L	M14x1,5	SW 17	20 Nm
08	10L	M16x1,5	SW 19	40 Nm
10	12L	M18x1,5	SW 22	50 Nm
12	15L	M22x1,5	SW 27	75 Nm
16	18L	M26x1,5	SW 32	85 Nm
20	22L	M30x2	SW 36	100 Nm
25	28L	M36x2	SW 41	180 Nm
32	35L	M45x2	SW 55	220 Nm

Quelle: Fa. Schaffer

Heavy type (DKOS)				
DN	RA	Screw	Tool	Torque
05	8S	M16x1,5	SW 19	40 Nm
06	10S	M18x1,5	SW 22	50 Nm
08	12S	M20x1,5	SW 24	60 Nm
10	14S	M22x1,5	SW 27	75 Nm
12	16S	M24x1,5	SW 30	90 Nm
16	20S	M30x2	SW 36	100 Nm
20	25S	M36x2	SW 41	180 Nm
25	30S	M42x2	SW 50	270 Nm
32	38S	M52x2	SW 60	400 Nm

Quelle: Fa. Schaffer

Surface galvanic coated and dry (O-Ring oiled). Tolerance torque -10 %

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B.1 Maintenance plan 3TNV88 – 4TNV88 (overview)

Work description

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

	Maintenance plan/service hours (s/h)						
	Maintenance work (once a day)	Every 50 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				●			●
• Hydraulic oil tank breather				●			●
• Gearbox oil [5,6]		●		●			●
Inspection work ( ):							
Check the following material. Refill if necessary:							
• Engine oil	●					●	
• Engine coolant	●					●	
• Hydraulic oil	●					●	
• Gearbox oil		●					●
Clean water ducts [7]				●			●
Check engine/hydraulic oil radiator and air conditioning for contamination. Clean if necessary	●					●	
Check cooling systems, heating and hoses for leaks and pressure (visual check)	●					●	
Check the joystick/drive valve pilot control filter for dirt, clean it if necessary [8]				●			
Replace cab filter for heating and air conditioning			●				●
Air filter (damage)	●					●	
Prefilter with water separator: drain water	●					●	
• Clean			●				●
Check V-belt condition and tension	●					●	
Check exhaust system for damage and condition	●					●	
Check valve clearance. Adjust if necessary				●			●

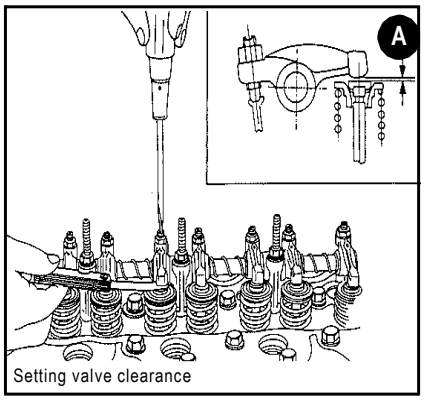
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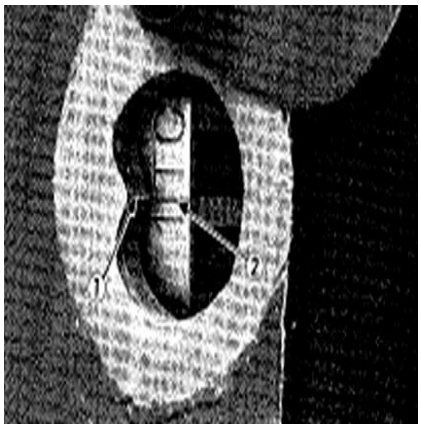
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D.3 Kubota settings

Checking and adjusting valve clearance



Setting valve clearance



Setting valve clearance

Important!

Always measure and set valve clearance on a cold engine.

☞ *Remove the valve cover*

☞ *Align the TDC mark on the flywheel with the mark on the edge of the flywheel housing so that the first piston is in the TDC compression position (both rocker arms on the 1st cylinder can be moved).*

☞ *Measure valve clearance with a feeler gauge (A) according to the table below.*

➥ Valve clearance 0.18 – 0.22 mm (0.007" – 0.009")

☞ *Adjust valve clearance with the set screw if the values do not coincide with the specified values.*

☞ *After setting the first group, turn the engine to overlapping TDC (both rocker arms on the first cylinder are firm), then check and if necessary, set the remaining valve clearances.*

☞ *Mount the valve cover back on again*

The TDC mark on the flywheel applies to the first cylinder only. The other cylinders have no TDC marks.

Cylinder	1		2		3	
	Inlet	Exhaust	Inlet	Exhaust	Inlet	Exhaust
1 cylinder compression TDC	X	X		X	X	
1 cylinder overlapping TDC			X			X

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TABLE OF CONTENT :

Chapter		Page
O	Table of content / Product history	
A	**Technical data**	
1	Dimensions	A2
2	Kinematic	A7
3	Lift capacities	A9
4	Cycle courses	A16
5	Hydraulic settings	A26
6	Diesel engine settings	A29
	Specifications	A33
7	Tightening torques	A37
B	**Maintenance**	
1	Maintenance schedule	B1
2	Lubricants	B4
	Maintenance label	B6
3	Hydraulic system	B8
4	Auxiliary hydraulics	B15
5	Hydraulic pump	B16
6	Hose burst protection valve	B16
7	Drive unit	B17
8	Swivel unit	B17
9	Hydraulic oil tank	B18
10	Diesel engine	B18
11	Cabin	B20
12	Undercarriage	B21
C	**Hydraulic**	
1	Hydraulic diagram A4	C1
	Hydraulic diagram A3	C3
2	Component positions	C5
3	Hydraulic pump	C7
4	Pilot oil supply unit	C12
5	Main valve block	C17
6	Pilot control valves	C33
7	Swivel unit	C36
8	Drive unit	C42
9	Swivel joint	C55
10	Switch valves	C58
11	Way valve (Vario)	C61
12	Pressure limiting valve (Vario)	C62
13	Hydraulic oil tank	C63

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Chapter		Page
D	Diesel engine	
	Engine overview	D2
	Generator	D3
	Engines	D5
	Fuel supply systems	D11
	Kubota settings	D17
	Yanmar settings	D21
	Tightening order for cylinder head bolts	D23
	Checking the injection nozzles	D24
	Injection time	D26
	Replacement of fuel injection pump	D30
	Adjusting engine revs	D32
	Compression	D32
	Checking the coolant thermostat	D33
	Checking the thermal switch	D33
	Oil pressure switch	D34
	Checking the coolant circuit	D34
	Engine trouble	D35
E	Elektric	
F	Operation elements	
G	Attachment	

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Abbreviations:

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

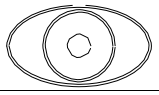
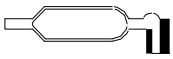
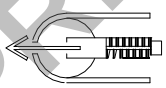
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B.1 Maintenance label

Explanation of symbols on the maintenance label

Symbol	Assembly	Explanation
	General	Visual check
	General	Grease instructions
	Fuel system	Drain condensation water
	Fuel system	Replace the fuel filter, clean the fuel prefilter
	Radiator	Check the coolant level
	Radiator	Drain and fill in new coolant
	Engine	Check valve clearance. Adjust if necessary
	Engine	Check the engine oil level
	Engine	Change engine oil
	Engine	Replace the oil filter
	Engine	Check V-belt tension
	Travelling drive	Change oil
	Travelling drive	Check oil
	Undercarriage	Check chain tension
	Hydraulic system	Check oil level
	Hydraulic system	Change hydraulic oil
	Hydraulic system	Replace the hydraulic oil filter, replace the breather filter

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7. SWIVEL UNIT

Neuson 2503 / 3003 / 3503 / 3703 :

Type:Neuson 2503 > 2528401 2528490 (Fabr.Nr.: AC00901 and higher)
Neuson 30 - 3703 > 3028401 3028490 (Fabr.Nr.: AC00904 and higher)

Serviee News

Service News 72l02:
Theme: New swivel unit 2503-3703 (Type 490")
Fabr.No.: See list
Swivel gear box still free of maintenance !

Features: - Maintenanee·free gear box (swivel motor lubricated by hydraulic oil)
Warning: Use only the specified hydraulic oil !
- Mech. motor brake (multiple-disk brake) hydr. driven
- Swash-plate piston motor

Fig.: Port assignment · swivel unit 2528401 3028401

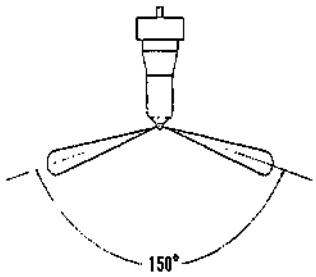


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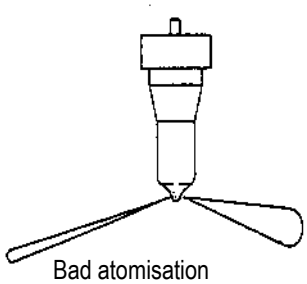
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Checking the nozzle jet



Normal atomisation

Fig. 5: Nozzle jet



Bad atomisation

- ☞ *Remove the injection lines and the injection nozzles*
- ☞ *Connect the injection nozzle with the high pressure line of the nozzle tester*
- ☞ *Quickly create pressure until the nozzle ejects fuel (ejection 3 – 4 times)*
- ☞ *Hold a white sheet of paper about 30 cm (12") away from the nozzle and let the nozzle eject fuel*
- ☞ *The nozzle jet must create a shape on the paper as shown in* **fig. 6/left**



Fig. 6: Shape of nozzle jet

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