Service Manual

Compact loaders

901s/901sp



Machine models	**901s/sp**
Edition	**1.0**
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2.3 Travelling drive

Variable displacement pump	Model 901s/model 901sp AA20VG45
Design	Infinitey variable axial-piston variable displacement pump with speed-sensitive control
Displacement	2 x 45 cm³/rev (2.75 cu in/rev) = 2 x 120 l/min (31.7 gal/min) at 2800 rpm
Max. system service pressure	345 bar (5004 psi)
Starting RPMs	1200 rpm at 50 bar (725 psi) HP
Boost pump	**Model 901s/model 901sp**
Design	Gear (external)
Displacement	19.0 cm³/rev (1.16 cu in/rev)
Charging/boost pressure	26 bar (377 psi)
Hydraulic motor	**Model 901s/model 901sp**
Design	Axial piston motors with reduction gear and integrated multi-disc brake; Final drive via wet heavy duty roller tracks
Max. capacity 1	45.4 cm³/rev (2.77 cu in/rev)
Max. capacity 2	28.1 cm³/rev (1.71 cu in/rev)
Drive speed	11/18 kph (6.8/11.2 mph)
Flushed with flush valve	13.5 l/min (3.6 gal/min) at 26 bar (377 psi)
Gear reduction	15.11

2.4 Brakes

Service brake	Model 901s	Model 901sp
Design	Hydrostatic	
Location	Travelling drive	
Effect	Service brake via hydrostatic closed circuit by means of neutral position of pump	
Parking brake	**Model 901s**	**Model 901sp**
Design	Manual, negative-action electrohydraulic disc brake	
Location	On either side of hydraulic motor	
Effect	Hydraulic release; braked if no pressure	

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5.8 Quickhitch system



Attachments are fitted and removed from the loader unit by means of the quickhitch. If you are fitting or removing attachments with their own hydraulic functions – e.g. rotary broom or auger – you must follow the special information given in the Operator's Manual of the attachment. Also refer to the Operator's Manual of the attachment for the procedure to follow for fitting an attachment onto a quickhitch. Chapter 3.40 "Re-equipping the loader unit" in the Operator's Manual describes how attachments are fitted and removed from the loader unit.

5.9 Emergency lowering

At engine standstill, or if there is a defect in the hydraulic system, the loader unit is lowered by means of emergency lowering. This works only if the safety bar is closed

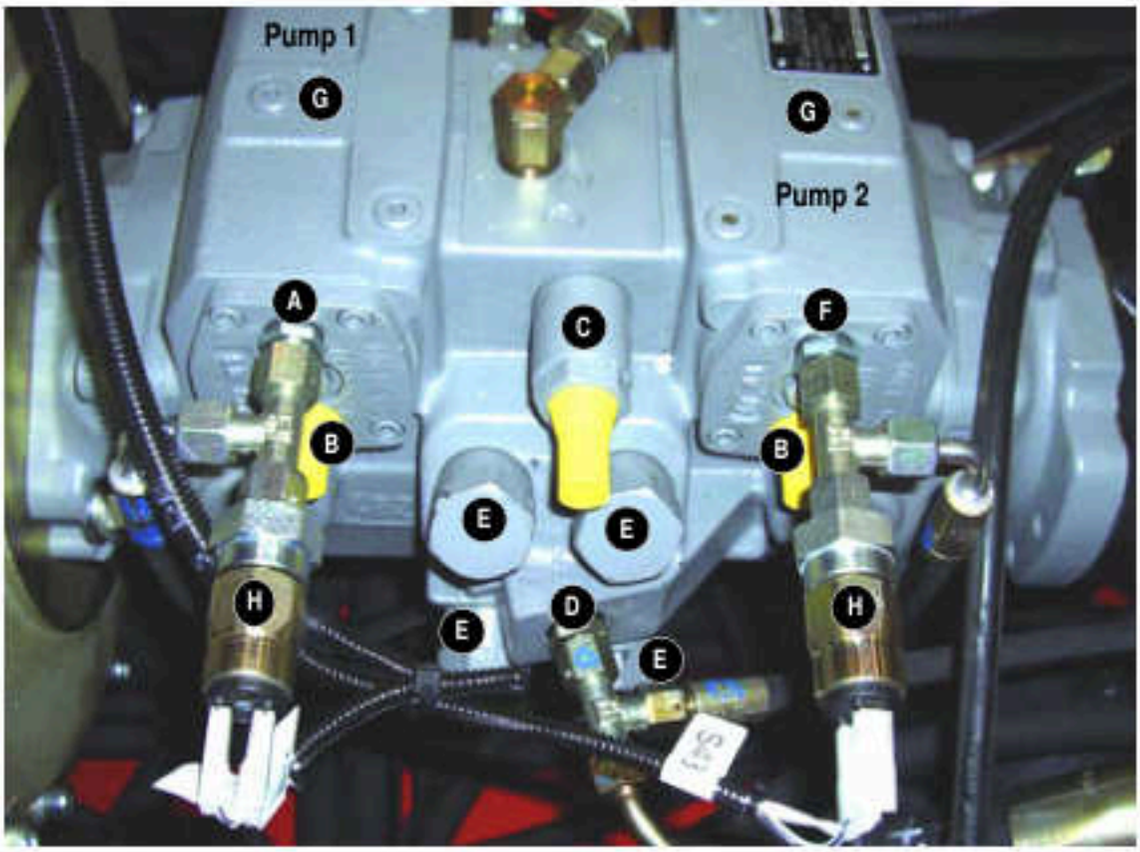
5.10 Troubleshooting in the hydraulic system

Problem	Possible causes
Hydraulic system without function	Hydraulic oil level too low
	Defective pressure limiting valve on main valve block
	Spool is stuck.
	Hose rupture (work hoses)
	Defective connection on solenoid valve
Driving without actuating the control levers, more propulsion on one side	Misalignment of neutral position – slackened fastening nut
Brake is released.	Defective brake valve
Hydraulic hammer does not work correctly.	Quickhitch couplings not connected correctly
	Hydraulic oil quantity too high/too low
	Hydraulic oil pressure too high/too low

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Wiring diagrams and wiring harnesses include all options.

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Pos.	Description
A	Pilot control port, left, reverse driving (X4)
B	Cradle stroke limitation
C	DA cartridge
D	P supply (right-hand side joystick)
E	High pressure limiting valve
F	Pilot control port, right, reverse driving (X4)
G	Housing vent
H	Backup warning system pressure switch (option)

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1.5 Machine overview



1 Rotating beacon (option)
2 Front working light
Rear working light (option)
3 Left and right outside rearview mirrors (option)
4 Front headlights (option)
5 Handles
6 Standard bucket
7 Loader unit
8 Standard tyres
9 Exhaust pipe
10 Numberplate bracket (option)
11 Type label
12 Engine cover
13 Extra weight (option)



Fig. 7: Machine outside views

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6.25 Wiring diagram from serial no. DC00816 (legend)

No.	Description	Section	
B1	Fuel level indicator	E8 (1)	
B2	Horn	C2 (2)	
B3	Backup warning system	E8/9 (1)	Option
B15	Coolant level	E6 (1)	
B18	Diodes (warning buzzer unit)	B/C 5/6 (1)	
B19	Quickhitch warning buzzer	B6 (2)	
E1	Front right parking light	D2/3 (2)	
E2	Rear right light	D5 (2)	
E3	Front left parking light	E2/3 (2)	
E4	Rear left light	E5 (2)	
E5	Low beam (right)	D2/3 (2)	
E6	Low beam (left)	E2/3 (2)	
E7	Rear working light	C1 (2)	Option
E9	Front working light	C1 (2)	
E10	Front working light	C1 (2)	
E14	Interior light	C3 (2)	
E15	Cigarette lighter	B3 (1)	
E16	Numberplate light	D5 (2)	
F1	Main fuse	D1 (1)	
F2	Main fuse	D1 (1)	
F3	Indicating instruments, alternator, starting relay	A3 (1)	
F4	Valves	A8	
F5	Working lights	A1 (1)	
F6	Lights according to STVO Austrian road traffic regulations	A3 (1)	
F7	Turn indicators	A4/5 (1)	
F8	Hazard warning system	A4 (1)	
F9	Cigarette lighter	A3 (1)	
F10	Rotating beacon	A2 (2)	Option
F11	Valves option	A6 (2)	Option
F12	Attachments 1	A9 (2)	Option
F13	Attachments 2	A10 (2)	Option
F14	Attachments 3	A10 (2)	Option
F15	Heating	A11 (2)	Option
F16	Air conditioning	A13 (2)	Option
F17	Wiper	A13 (2)	
F18	Spare		
G1	Alternator	E4 (1)	
G2	Battery	E1 (1)	
H24	Front right turn indicator	D3 (2)	
H25	Rear right turn indicator	D5 (2)	
H26	Front left turn indicator	E3 (2)	
H27	Rear left turn indicator	E5 (2)	
H28	Rotating beacon	C2 (2)	Option
K5	Preheating relay	E1/2 (1)	
K7	Start high current relay	D2 (1)	
K10	Turn indicator relay	C5 (2)	
K11	Air conditioning relay	C12 (2)	Option
K16	Attachment control 1 relay	C8 (2)	Option
K17	Attachment control 2 relay	C9 (2)	Option
K18	Attachment control 3 relay	C10 (2)	Option
K34	Load stabiliser relay	C7/8 (2)	Option
K36	2nd speed relay	B13/14 (1)	
M1	Starter	E2 (1)	
M2	Wiper	D14 (2)	
M4	Heating	E11 (2)	Option
M5	Washer pump	D13 (2)	
M12	Air conditioning fan	E13 (2)	Option
N3	Preheating time control unit	C1/2 (1)	
R1	Glow plug	E2 (1)	
R8	Glow plug	E2 (1)	
S1	Preheating start switch	A/B1/2 (1)	
S2	Engine oil pressure switch	E5 (1)	
S3	Engine temperature switch	E5 (1)	
S4	Air filter pressure switch	D6/7 (1)	
S5	Hydraulic oil pressure switch	E7 (1)	
S6	Hydraulic oil temperature switch	E7 (1)	
S8	Battery master switch	E1 (1)	
S11	Parking brake pressure switch	E8 (1)	
S12	Turn indicator switch	E4/5 (2)	
S14	Light switch	B3/4 (2)	
S15	Heating switch	A/B11 (2)	Option
S16	Working light switch	A/B1 (2)	
S18	Rotating beacon switch	A/B2 (2)	Option
S19	Hazard warning switch	B4/5 (2)	
S20	Wiper switch	C13/14 (2)	
S21	2nd speed tip switch	C13 (1)	
S26	Boost pump pressure switch	E5 (1)	
S28	Work hydraulics circuit breaker	B9 (1)	Option
S29	Safety switch	B8 (1)	
S30	Attachment controls 1 tip switch	B8 (2)	Option
S31	Attachment controls 2 tip switch	B9 (2)	Option
S32	Parallel lift switch	B10 (1)	
S33	Power Flow switch	B12 (1)	
S34	Attachment controls 3 tip switch	B10 (2)	Option
S36	Rear outrigger switch	B7 (2)	Option
S40	Quickhitch switch	B6 (2)	
S43	Backup warning system switch	D8/9 (1)	Option
S44	Load stabiliser tip switch	B7/8 (2)	Option
S51	Air conditioning switch	A/B12 (2)	Option
S52	Air conditioning pressure switch	E12 (2)	Option
S54	Air conditioning thermostat	D12 (2)	Option
S55	Horn tip switch	C13/14 (1)	
S65	Parking brake switch	B11 (1)	
S78	Accumulator pressure switch (H controls)	C/D9 (1)	Option
S83	Speed Control valve switch	B10/11 (1)	
Y1	Cutoff solenoid	E4 (1)	
Y2	Speed Control valve	C10/11 (1)	
Y3	2nd speed valve	E14 (1)	
Y13	Drive safety valve	E9 (1)	
Y13.1	Work safety valve	E10 (1)	
Y20	Load stabiliser valve	E8 (2)	Option
Y21	Load stabiliser valve	E8 (2)	Option
Y25	Quickhitch valve	E6 (2)	Option
Y30	Minus compensation	E3 (1)	
Y31	Electro-magnetic clutch compressor	E12 (2)	
Y33	Power Flow I valve	E12 (1)	
Y34	Power Flow II valve	E12 (1)	
Y43	Parking brake magnet	E11 (1)	
Y55	Rear outrigger valve	E7 (2)	Option
Y60	Manifold-pressure compensator (turbocharger)	E3 (1)	
Y61	EGR valve	E3 (1)	
Y76	Parallel lift magnet	E10 (1)	
Y77	Parallel lift magnet	E11 (1)	
U1	Amplifier	C5/6 (1)	

Wiring diagram (legend)

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