

# Table of contents

## 1 Fundamental safety instructions

1.1	Warnings and symbols .....	1 -	2
1.2	Proper use of the loader .....	1 -	2
1.3	Organizational measures .....	1 -	2
1.4	Selection of personnel and necessary qualifications; basic responsibilities .....	1 -	3
1.5	Safety information for certain operating phases .....	1 -	4
1.5.1	Normal operation .....	1 -	4
1.5.2	Special work in the context of machine operation and elimination of defects during process or work; disposal .....	1 -	7
1.6	Instructions regarding special categories of danger .....	1 -	9
1.6.1	Electrical energy .....	1 -	9
1.6.2	Hydraulics .....	1 -	10
1.6.3	Noise .....	1 -	10
1.6.4	Oil, grease and other chemical substances .....	1 -	11
1.6.5	Gas, dust, steam, smoke .....	1 -	11
1.7	Transport and towing, recommissioning .....	1 -	11
1.8	Safety information for the contractor or the contractor's authorized personnel .....	1 -	12
1.8.1	Organizational measures .....	1 -	12
1.8.2	Selection of personnel and necessary qualifications; basic responsibilities .....	1 -	12

## 2 Signs

## 3 Protection against theft

3.1	Identifying features on the loader .....	3 -	2
3.2	Parking the loader .....	3 -	2
3.3	Transponder for drive-away interlock .....	3 -	3

## 4 Description

4.1	Overview .....	4 -	2
4.2	Loader .....	4 -	3
4.3	Wheel change .....	4 -	6
4.4	Controls .....	4 -	7
4.5	Fuses .....	4 -	9

## 5 Operation

5.1	Checks before commissioning .....	5 -	2
5.2	Commissioning .....	5 -	2
5.2.1	Starting the diesel engine .....	5 -	2
5.2.2	Winter operation .....	5 -	3
5.2.2.1	Fuel .....	5 -	3
5.2.2.2	Engine oil change .....	5 -	3
5.2.2.3	Changing the oil in the hydraulic system .....	5 -	3
5.2.2.4	Anti-freezing agent for the windshield washer system .....	5 -	4
5.2.3	Driving the loader on public roads .....	5 -	4
5.2.4	Working with the loader .....	5 -	5
5.2.5	Heating and ventilation system .....	5 -	6
5.2.5.1	Adjusting the air flow .....	5 -	6
5.2.5.2	Switching on the heater .....	5 -	6
5.3	Decommissioning the loader .....	5 -	7
5.3.1	Parking the loader .....	5 -	7
5.3.2	Switching off the diesel engine .....	5 -	7
5.3.3	Switching off the heating and ventilation system .....	5 -	7
5.3.4	Leaving the loader .....	5 -	7

5.4	Adjusting the driver's seat .....	5 -	8
5.4.1	Klepp seat .....	5 -	8
5.4.2	Isri seat .....	5 -	8
5.4.3	Grammer seat .....	5 -	9

## 6 Attachments

6.1	Mounting and dismounting attachments without hydraulic connections .....	6 -	2
6.1.1	Standard/lightweight bucket .....	6 -	2
6.1.2	Fork-lift attachment .....	6 -	3
6.2	Mounting and dismounting attachments with a hydraulic connection .....	6 -	4
6.2.1	Multi-purpose bucket .....	6 -	4
6.3	Using other attachments .....	6 -	6

## 7 Rescue, towing, lashing, lifting by crane

7.1	Rescue, towing, lashing .....	7 -	2
7.1.1	Rescue/towing of the articulated loader if the engine or drive has failed .....	7 -	2
7.1.1.1	Towing the articulated loader if the engine has failed .....	7 -	2
7.1.1.2	Towing the articulated loader if the drive has failed .....	7 -	5
7.2	Lifting by crane .....	7 -	6

## 8 Maintenance

8	Maintenance Plan AL 80 and AL 100 .....	8 -	1
8.1	Notes regarding maintenance .....	8 -	3
8.2	Maintenance work .....	8 -	3
8.2.1	Engine oil level check .....	8 -	3
8.2.2	Engine oil change .....	8 -	4
8.2.3	Fuel prefilter replacement .....	8 -	4
8.2.4	Maintaining/replacing the air filter .....	8 -	4
8.2.5	Replacing the safety cartridge .....	8 -	5
8.2.6	Front axle oil change .....	8 -	5
8.2.7	Front axle oil change .....	8 -	6
8.2.8	Rear axle oil level check .....	8 -	7
8.2.8.1	Slow loader » 20 km/h « .....	8 -	7
8.2.8.2	Fast loader » 30 km/h « .....	8 -	7
8.2.9	Rear axle oil change .....	8 -	8
8.2.9.1	Slow loader » 20 km/h « .....	8 -	8
8.2.9.2	Fast loader » 30 km/h « .....	8 -	9
8.2.10	Planetary gear .....	8 -	10
8.2.11	Planetary gear oil change .....	8 -	10
8.2.12	Hydraulic system oil change .....	8 -	11
8.2.13	Hydraulic oil filter cartridge replacement .....	8 -	12
8.2.14	Grease points .....	8 -	12
8.2.14.1	Articulated pendulum joint/steering cylinder .....	8 -	12
8.2.14.2	Bucket assembly AL 80, AL 100 and AL 100turbo .....	8 -	13
8.2.14.3	Bucket assembly AL 120 .....	8 -	14
8.2.14.4	Driver's cab door .....	8 -	14
8.2.14.5	Engine hood .....	8 -	15
8.2.14.6	Multi-purpose bucket .....	8 -	15
8.2.15	Oil lubrication points .....	8 -	16
8.2.16	Replacing the starter battery .....	8 -	16
8.2.17	Checking/adjusting the service/parking brake .....	8 -	16
8.2.18	Maintaining/replacing the fresh air filter .....	8 -	17

## 9 Malfunctions, causes and remedies

## 10 Diagrams

10.1	Electric wiring diagram .....	10 -	3
10.2.1	Hydraulic diagram (AL 80 and AL 100) .....	10 -	7
10.2.2	Hydraulic diagram AL 120 .....	10 -	9

**11 Technical data (loader)**

11.1	<b>AL 80</b>	11	-	2
11.1.1	Loader	11	-	2
11.1.2	Engine	11	-	2
11.1.3	Starter	11	-	2
11.1.4	Alternator	11	-	2
11.1.5	Hydrostatic drive	11	-	2
11.1.6	Axle loads	11	-	2
11.1.7	Tires	11	-	2
11.1.8	Steering system	11	-	3
11.1.9	Brake system	11	-	3
11.1.10	Electrical system	11	-	3
11.1.11	Hydraulic system	11	-	3
11.1.12	Fuel supply system	11	-	3
11.1.13	Heating and ventilation system	11	-	3
11.1.14	Return suction filter	11	-	3
11.1.15	Electric contamination indicator	11	-	3
11.1.16	Oil cooler with temperature-controlled fan	11	-	3
11.1.17	Noise emission	11	-	3
11.2	<b>AL 100</b>	11	-	4
11.2.1	Loader	11	-	4
11.2.2	Engine	11	-	4
11.2.3	Starter	11	-	4
11.2.4	Alternator	11	-	4
11.2.5	Hydrostatic drive	11	-	4
11.2.6	Axle loads	11	-	4
11.2.7	Tires	11	-	4
11.2.8	Steering system	11	-	5
11.2.9	Brake system	11	-	5
11.2.10	Electrical system	11	-	5
11.2.11	Hydraulic system	11	-	5
11.2.12	Fuel supply system	11	-	5
11.2.13	Heating and ventilation system	11	-	5
11.2.14	Return suction filter	11	-	5
11.2.15	Electric contamination indicator	11	-	5
11.2.16	Oil cooler with temperature-controlled fan	11	-	5
11.2.17	Noise emission	11	-	5
11.3	<b>AL 100 turbo</b>	11	-	6
11.3.1	Loader	11	-	6
11.3.2	Engine	11	-	6
11.3.3	Starter	11	-	6
11.3.4	Alternator	11	-	6
11.3.5	Hydrostatic drive	11	-	6
11.3.6	Axle loads	11	-	6
11.3.7	Tires	11	-	6
11.3.8	Steering system	11	-	7
11.3.9	Brake system	11	-	7
11.3.10	Electrical system	11	-	7
11.3.11	Hydraulic system	11	-	7
11.3.12	Fuel supply system	11	-	7
11.3.13	Heating and ventilation system	11	-	7
11.3.14	Return suction filter	11	-	7
11.3.15	Electric contamination indicator	11	-	7
11.3.16	Oil cooler with temperature-controlled fan	11	-	7
11.3.17	Noise emission	11	-	7
11.4	<b>AL 120</b>	11	-	8
11.4.1	Loader	11	-	8
11.4.2	Engine	11	-	8
11.4.3	Starter	11	-	8
11.4.4	Alternator	11	-	8
11.4.5	Hydrostatic drive	11	-	8
11.4.6	Axle loads	11	-	8

11.4.7	Tires .....	11 -	8
11.4.8	Steering system .....	11 -	8
11.4.9	Brake system .....	11 -	9
11.4.10	Electrical system .....	11 -	9
11.4.11	Hydraulic system .....	11 -	9
11.4.12	Fuel supply system .....	11 -	9
11.4.13	Heating and ventilation system.....	11 -	9
11.4.14	Return suction filter .....	11 -	9
11.4.15	Electric contamination indicator .....	11 -	9
11.4.16	Oil cooler with temperature-controlled fan .....	11 -	9
11.4.17	Noise emission .....	11 -	9

## 12 Technical data (attachments)

12.1	AL 80 attachments .....	12 -	2
12.1.1	Buckets .....	12 -	2
12.1.2	Fork-lift attachment .....	12 -	4
12.1.3	Lifting hook .....	12 -	4
12.2	AL 100 / AL 100 turbo attachments .....	12 -	6
12.2.1	Buckets .....	12 -	6
12.2.2	Fork-lift attachment .....	12 -	8
12.2.3	Lifting hook .....	12 -	8
12.3	AL 120 attachments .....	12 -	10
12.3.1	Buckets .....	12 -	10
12.3.2	Fork-lift attachment .....	12 -	12
12.3.3	Lifting hook .....	12 -	12

## 13 Additional options, modifications, notes on inspection for loaders

13.1	Additional options .....	13 -	2
13.2	Modifications .....	13 -	2