Technical Data

Engine

	L 506	L 508
Diesel engine	4TNV98C-SJLW5	4TNV98C-PJLW5
Design	Water-cooled diesel suction engine	
Cylinder inline	4	4
Fuel injection process	Common Rail direct injection	
Max. gross output to ISO 3046 and SAE J1995	kW/HP 46/63 at RPM 2,200	50/68 2,400
Max. net output to ISO 9249 and SAE J1349	kW/HP 45/61 at RPM 2,200	48/65 2,400
Rated output to ISO 14396	kW/HP 46/63 at RPM 2,200	50/68 2,400
Max. net torque to ISO 9249 and SAE J1349	Nm 239 at RPM 1,430	237 1,560
Displacement	litres 3.319	3.319
Bore/Stroke	mm 98/110	98/110
Air cleaner system	Dry air filter with main and safety element	
Electrical system		
Operating voltage	V 12	12
Battery	Ah 1 x 100	1 x 100
Alternator	V/A 12/80	12/80
Starter	V/kW 12/3	12/3

The exhaust emissions are below the limits in stage IIIB / Tier 4f.

Driveline

Stepless hydrostatic travel drive

Design	Swash plate type variable flow pump and a variable axial piston motor in a closed loop circuit
Filtering system	Suction return line filter for closed circuit
Control	Control of travel drive with travel and combined inching pedal. The inching pedal permits continuously variable adjustment of crowding and tractive force to match ground and operating conditions. The Liebherr joystick is used to control forward and reverse travel
Travel speed range (forward and reverse)	Travel speed range 1 0 – 6 km/h Travel speed range 2 0 – 20 km/h

The quoted speeds apply with the tyres that are standard equipment on the loader.

Axles

Four-wheel drive

Design	Rigidly mounted planetary-hub axle
Differentials	Automatic limited-slip differential with 45% locking action
Reduction gear	Planetary final drive in wheel hubs
Track width	Max. 1,350 mm

Brakes

Service brake	Self-inhibition of the hydrostatic travel drive, wear free, effective on all 4 wheels and additional, hydraulically activated drum brake
Parking brake	Mechanically operated drum brake

The braking system meets the requirements of the EC guidelines 71/320.

Steering

Design	Oscillating center pivot
Articulation angle	40° to each side
Centre-pivot steering	10° to each side

Attachment Hydraulics

Design	Gear pump to supply attachment hydraulics and steering system (via priority valve)
Filtering	Suction return line filter in the hydraulic reservoir
Control	Joystick travel control with Liebherr control lever, direct control
Lift circuit	Lifting, neutral, lowering Float position controlled by Liebherr joystick with detent
Tilt circuit	Tilt back, neutral, dump
Additional hydraulics	3. control circuit is optional equipment

		L 506	L 508
Max. flow	l/min.	70.4	76.8
Max. pressure	bar	230	230

Attachment

Geometry	Powerful Z-bar linkage with parallel guidance and hydraulic quick hitch as standard
Bearings	Lathe-turned thick-walled bushings with lubricating grooves

Cycle time at nominal load	L 506	L 508
Lifting	5.3 s	6.5 s
Dumping	1.3 s	1.5 s
Lowering (empty)	2.9 s	4.0 s

Operator's Cab

Design	The cab is mounted on the rear section, with built in ROPS/FOPS structure. Operator's door with 178° opening angle, ventilation opening on the right side, tinted safety glass window ROPS roll over protection per EN/ISO 3471/ EN 474-1 FOPS falling objects protection per EN/ISO 3449/ EN 474-1 Adjustable steering column available as optional extra
Operator's seat	4 way adjustable seat with seat belt, adjustable for operator's weight (mechanically sprung)
Cab heating and ventilation	Operator's cabin with defroster and rear window heating, fresh air filter, air recirculation system and hot water heating, cabin ventilation

Sound Level

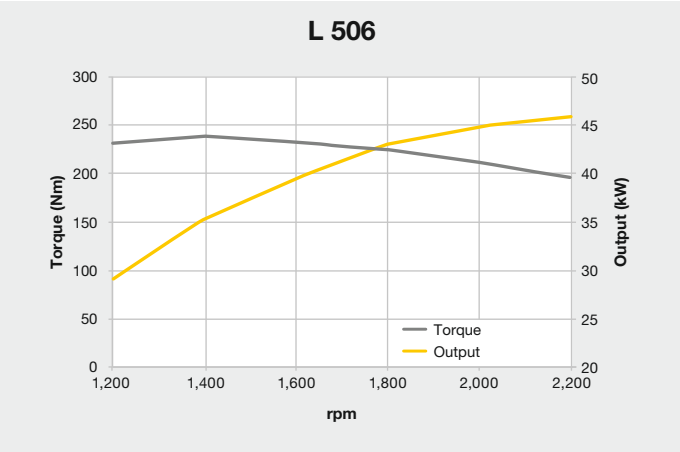
Sound pressure level to ISO 6396	L_{pA} (inside cab)	= 78 dB(A)
Sound power level to 2000/14/EC	L_{WA} (surround noise)	= 101 dB(A)

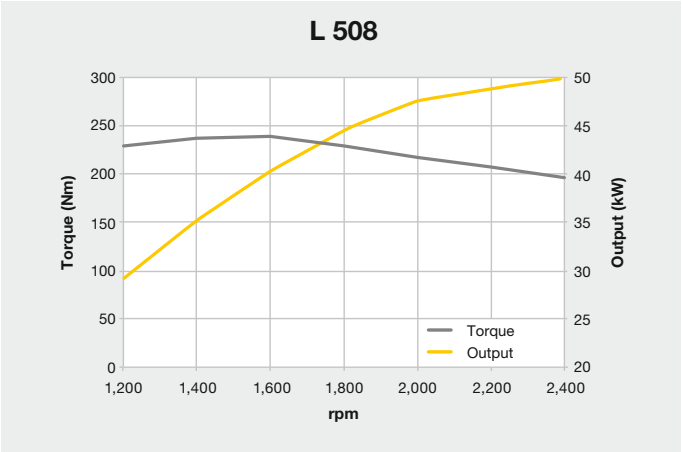
Capacities

Fuel tank	50 l
Engine oil (inclusive filter change)	10.2 l
Coolant	12 l
Front axle	6 l
Rear axle	6 l
Transmission	1 l
Hydraulic tank	55 l
Hydraulic system, total	90 l

Technical Data

Engine Output / Torque





Tyres

	Size and tread code		Change of operating weight kg	Width over tyres mm	Change in vertical dimensions * mm	Use
L 506 Compact						
Bridgestone	365/80R20 VUT	L2	47	1,750	31	Gravel, Asphalt (all ground conditions)
Bridgestone	405/70R20 VUT	L2	83	1,790	33	Gravel, Asphalt (all ground conditions)
Dunlop	15.5/55R18 SP PG7	L2	– 53	1,760	– 43	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	365/70R18 SP T9	L2	– 37	1,750	– 14	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	365/80R20 SP T9	L2	39	1,750	41	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	405/70R18 SP T9	L2	19	1,780	9	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	405/70R20 SP T9	L2	75	1,780	35	Sand, Gravel, Asphalt (all ground conditions)
Firestone	340/80R18 Duraforce UT	L3	0	1,740	0	Gravel, Asphalt, Industry (all ground conditions)
Firestone	365/80R20 Duraforce UT	L3	60	1,760	38	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 Duraforce UT	L3	101	1,780	28	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 R8000 UT	L2	78	1,780	28	Earthworks, Green area (all ground conditions)
Firestone	405/70R18 Duraforce UT	L3	71	1,790	8	Gravel, Asphalt, Industry (all ground conditions)
Michelin	375/75R20 XZSL	L3	85	1,780	37	Gravel, Asphalt, Industry (all ground conditions)
Michelin	400/70R20 BIBLOAD	L3	75	1,780	23	Gravel, Asphalt, Industry (all ground conditions)
Michelin	400/70R20 XMCL	L2	91	1,790	29	Earthworks, Green area (all ground conditions)
Mitas	365/70R18 EM-01	L2	– 21	1,760	– 15	Gravel, Asphalt (all ground conditions)
Mitas	365/80R20 EM-01	L2	39	1,760	37	Gravel, Asphalt (all ground conditions)
Mitas	405/70R18 EM-01	L2	35	1,790	10	Gravel, Asphalt (all ground conditions)
Mitas	405/70R20 EM-01	L2	71	1,790	35	Gravel, Asphalt (all ground conditions)
Trelleborg	400/70R20 TH400	L2	85	1,780	23	Earthworks, Green area (all ground conditions)
L 508 Compact						
Bridgestone	365/80R20 VUT	L2	– 24	1,750	23	Gravel, Asphalt (all ground conditions)
Bridgestone	405/70R20 VUT	L2	12	1,790	25	Gravel, Asphalt (all ground conditions)
Dunlop	15.5/55R18 SP PG7	L2	– 124	1,760	– 51	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	365/80R20 SP T9	L2	– 32	1,750	33	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	405/70R18 SP T9	L2	– 52	1,780	1	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	405/70R20 SP T9	L2	4	1,780	27	Sand, Gravel, Asphalt (all ground conditions)
Firestone	340/80R18 Duraforce UT	L3	– 71	1,740	– 8	Gravel, Asphalt, Industry (all ground conditions)
Firestone	365/80R20 Duraforce UT	L3	– 11	1,760	30	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 Duraforce UT	L3	30	1,780	20	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 R8000 UT	L2	7	1,780	20	Earthworks, Green area (all ground conditions)
Firestone	405/70R18 Duraforce UT	L3	0	1,790	0	Gravel, Asphalt, Industry (all ground conditions)
Michelin	375/75R20 XZSL	L3	14	1,780	29	Gravel, Asphalt, Industry (all ground conditions)
Michelin	400/70R20 BIBLOAD	L3	4	1,780	15	Gravel, Asphalt, Industry (all ground conditions)
Michelin	400/70R20 XMCL	L2	20	1,790	21	Earthworks, Green area (all ground conditions)
Mitas	365/80R20 EM-01	L2	– 32	1,760	29	Gravel, Asphalt (all ground conditions)
Mitas	405/70R18 EM-01	L2	– 36	1,790	2	Gravel, Asphalt (all ground conditions)
Mitas	405/70R20 EM-01	L2	0	1,790	27	Gravel, Asphalt (all ground conditions)
Trelleborg	400/70R20 TH400	L2	14	1,780	15	Earthworks, Green area (all ground conditions)

* The stated values are theoretical and may deviate in practice.