Document Title: **Description**	Function Group: **000**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Description

L50C is a four-wheel drive loader with articulated frame steering.

The engine is a four-cylinder, four-stroke, direct-injection, turbocharged diesel engine with the type designations TD 40 GA, TD 40 KAE or TD 40 GFE. The two last are low-emission engines.

The machine has hydrostatic power transmission which means that a hydrostatic pump is fitted to the engine and this pump transfers the power via oil pressure to a hydrostatic motor. The hydrostatic motor is fitted to a gearbox of the Power Shift type where all gear wheels are in constant mesh. The gearbox designation is HST-75.

Front and rear axles have fully floating drive shafts with planetary type gears in the hubs. Front axle with a differential lock is optional.

The service brakes of the machine are wet type disc brakes. The service brakes are built integral with the planetary hub gears. The parking brake, of the drum brake type, is fitted on the front axle.

The machine is provided with a load-sensing variable displacement hydraulic pump which via a central valve provides oil to steering, brakes, servo and working hydraulics.

For further description of functions and components, see the respective sections.

Figure 1
Loader L50C

Document Title: **Product identification plates**	Function Group: **000**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Product identification plates

The illustration below shows which plates should be fitted on the machine and where they are positioned.
When ordering spare parts and in all enquiries concerning service matters, the model designations and serial numbers should always be quoted.
When applicable, any information on the additional plate "INCL. PART" should also be stated.

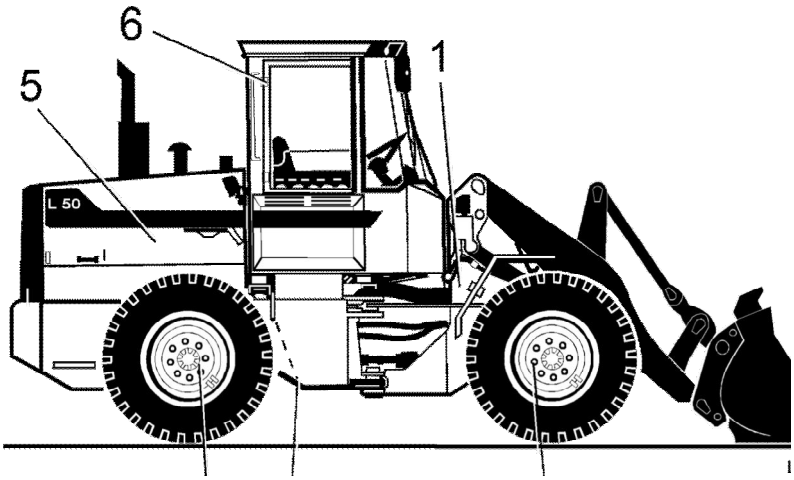

Figure 1
Product identification plates

1. Product plate with **P**roduct**I**dentification**N**umber, **PIN** for the complete machine (showing model / type designation, product and serial numbers and additional equipment). The plate is fitted on the left side of the front frame. Type designation and serial number are also stamped on the front right frame.
2. Front drive axle component plate with product and serial numbers is positioned on the axle housing.
3. Gearbox component plate with product and serial numbers is positioned on the front part of the gearbox.
4. Rear drive axle component plate with product and serial numbers is positioned on the axle housing.
5. Engine type designation, part and serial numbers are stamped into the cylinder block near the upper edge on the right side under the turbocharger.
6. Cab type, type approval and serial number are positioned on the right roof post inside the cab.

Document Title: **Brakes**	Function Group: **030**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Brakes

Hydraulic pump (in common with other hydraulics)

Type	Nine-cylinder axial piston pump, variable displacement

Service brakes

Type	Dual circuit hydraulic disc brake
Brake friction area, front	1750 cm² (271 in²)
Brake friction area, rear	1750 cm² (271 in²)
Accumulator capacity	3 x 0.5 litre (3 x 30.5 in3)
Precharging pressure, new accumulators	5.0 MPa (50 bar) (725 psi)
Min. permissible pressure	3.5 MPa (35 bar) (508 psi)
Foot brake pedal angle (adjustable)	std. 50°
Brake pressure max.	15.0 ±0.5 MPa (150 ±5 bar) (2176 ±73 psi)
Brake pressure in circuit	8.0 ±0.4 MPa (80 ±4 bar) (1160 ±58 psi)
Unloading pressure (electrical)	13.7 ±0.3 MPa (137 ±3 bar) (1987 ±44 psi)
Cut-in pressure	12.0 ±0.3 MPa (120 ±3 bar) (1740 ±44 psi)

Brake disc, thickness

1. Axles without built-in wear indicator

Axle type	Product no.	Up to incl. serial number:
Standard	23820	–12161
"Limited slip", front	23831	–10014
"Limited slip", rear	23868	–10034
Mechanical differential lock	23836	–10854
New disc, approx.:	8.9 mm (0.35 in)	
Minimum permissible measurement:	7.6 mm (0.30 in)	

2. Axles with built-in wear indicator

Axle type	Product no.	W.e.fr. serial number:
Standard	23820	12162–
"Limited slip", front	23831	10015–
"Limited slip", rear	23868	10035–
Mechanical differential lock	23836	10855–
New disc, approx.:	8.9 mm (0.35 in)	
Minimum permissible measurement:	7.6 mm (0.30 in)	

Parking brake

Type	Mechanically operated drum brake on front axle

Optional equipment

Hydraulic control

Document Title: **Capacities and weights**	Function Group: **030**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Capacities and weights

Capacities

NOTE: Stated capacity applies when changing, unless otherwise stated.

	dm^3 = litres	**(US gal)**
Engine incl. filter	11.0	2.9
Cooling system	22.0	5.8
Fuel tank	170.0	44.9
Gearbox	6.5	1.7
Front axle incl. hub gears	25.5	6.7
Rear axle incl. hub gears	24.5	6.5
Hydraulic system (total)	106.0	28.0
Hydraulic oil tank	65.0	17.2

Weights, approx.

	lb	**kg**
Engine, TD40GA	410	904
Engine, TD40KAE	430	948
Engine, TD40GFE	450	992
Radiator	50	110
Hydrostatic pump	54	119
Hydrostatic motor	46	101
Gearbox HST-75	160	353
Front axle	385	849
Rear axle	375	827
Steering cylinder	14	31
Front frame	730	1609
Rear frame	780	1720
Counterweight	630	1389
Belly plate	55	121
Lifting frame, incl. links and pivot pins	845	1863
Attachment bracket	170	375
Lifting cylinder	57	125
Tilting cylinder	62	137
Cab	600	1323
Hydraulic oil pump	40	88
Control valve	45	99
Central valve	25	55
Fuel tank	55	121
Hydraulic oil tank	45	99
Operator seat	45	99

Document Title: **Capacities and weights**	Function Group: **030**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Capacities and weights

Capacities	**litres (US gal)**
NOTE: Stated capacity applies when changing, unless otherwise stated.	
Gearbox	6.5 (1.7)
Front axle incl. hub gears	25.5 (6.7)
Rear axle incl. hub gears	24.5 (6.5)
Hydraulic system (total)	106.0 (28.0)
Hydraulic oil tank	65.0 (17.2)

Weights, approx.	**kg (lb)**
Cab	600 (1323)
Operator seat	45 (99)
Hydrostatic pump	54 (119)
Hydrostatic motor	46 (101)
Gearbox HST-75	160 353)
Gearbox	170 (375)
Front axle	385 (849)
Rear axle	375 (827)
Steering cylinder	14 (31)
Front frame	730 (1609)
Rear frame	780 (1720)
Counterweight	630 (1389)
Belly plate	55 (121)
Lifting frame, incl. links and pivot pins	845 1863()
Attachment bracket	170 (375)
Lifting cylinder	57 (126)
Tilting cylinder	62 (137)
Hydraulic oil pump	40 (88)
Control valve	45 (99)
Central valve	25 (55)
Hydraulic oil tank	45 (99)

Document Title: **Engine**	Function Group: **030**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Engine

Unless otherwise stated the data are the same for engine versions TD40GA, TD40 KAE and TD40GFE.

General

Designation

TD40GA

TD40KAE

TD40GFE

General

Number of cylinders	4
Cylinder bore	100 mm (3.937 in)
Stroke	127 mm (5.0 in)
Cylinder capacity	4 litres (244 in^3)

Compression ratio

TD40GA	16:1
TD40KAE	17,5:1
TD40GFE	17,25:1
Order of injection	1-3-4-2

Weights, approx.

Engine, TD40GA	410 kg	(905 lb)
Engine, TD40KAE	430 kg	(948 lb)
Engine, TD40GFE	420 kg	(926 lb)

Capacities, dm^3 = litres (US gal)

NOTE: Capacity applies when changing, unless otherwise stated.

Engine incl. filter	11.0 litres (2.9 US gal)

Flywheel output at 36.7 r/s (2200 rpm)

TD40GA	68 kW (92 hp) SAE J 1349 Net 68 kW (92 hp) DIN 70020 Net 71.5 kW (97 hp) SAE J 1349 Gross
TD40KAE, TD40GFE	71 kW (96 hp) SAE J 1349 Net 71 kW (96 hp) DIN 70020 Net 74.5 kW (101 hp) SAE J 1349 Gross

Torque at 23.3 r/s (1400 rpm)

TD40GA	363 N m (268 lbf ft) SAE J 1349 Net 363 N m (268 lbf ft) DIN 70020 Net 373 N m (275 lbf ft) SAE J 1349 Gross
TD40KAE, TD40GFE	380 N m (280 lbf ft) SAE J 1349 Net 380 N m (280 lbf ft) DIN 70020 Net 390 N m (288 lbf ft) SAE J 1349 Gross

Idling speed

Idling speed, low	12.5 ± 0.5 r/s (750 ± 30 rpm) (1575 ±63 Hz)
Idling speed, hight	
TD40GA	38.2 ± 0.8 r/s (2290 ± 50 rpm) (4811 ±105 Hz)
TD40KAE	40 ± 0.8 r/s (2400 ± 50 rpm) (5042 ±105 Hz)
TD40GFE	38.8 ± 0.8 r/s (2330 ± 50 rpm) (4893 ±105 Hz)

Stall speed, when tilting forward

(Lifting arms in top position)	
TD40GA	2000 +200 –100 rpm
TD40KAE, TD40GFE	2250 +100 –70 rpm

Valve system

Valve arrangement	Overhead valves
Valve clearance, warm and cold engine	
inlet valves	0.25 mm (0.010 in)
exhaust valves	0.45 mm (0.018 in)

Air cleaner

Type	Air cleaning in three stages: Cyclone cleaner -primary filter - secondary filter

Lubrication system

Oil pressure, warm engine	
idling speed, low	
TD40 GA, TD40KAE	75 kPa (0.75 bar) (11.0 psi)
TD40GFE	50 kPa (0.50 bar) (7.3 psi)
idling speed, high, minimum	
TD40 GA, TD40KAE	280 kPa (2.80 bar) (41 psi)
TD40GFE	300 - 600 kPa (3.0-6.0 bar)(44-87 psi)

Fuel system

Injection pump

TD40GA	
Type	Distributor pump (rotor pump)
Designation	CAV DPS
Setting	18 ° ± 2 ° B.T.D.C.
TD40KAE	
Type	In-line pump, Bosch MW
Designation	PES4MW100/320RS1199
Setting	9° ±0.5° B.T.D.C. with governorcontrol lever in cold-starting position
Governor	RQV300 1100MW131K
TD40GFE	
Type	Distributor pump (rotor pump), LucasDP203
Designation	DES

Injectors

TD40GA	
Type	Multi-hole nozzle (4 holes)
Designation	JS
Opening pressure	25.3 ±0.5 MPa (253 5 bar) (3669 73 psi)
TD40KAE	
Type	Multi-hole nozzle (5 holes)
Designation	DSLA 140 P 292
Opening pressure	25.3 ±0.5 MPa (253 5 bar) (3669 73 psi)
TD40GFE	
Type	Multi-hole nozzle (5 holes)
Designation	KN
Opening pressure	29.0 MPa (290 bar) (4206 psi)

Fuel feed pump

TD40GA	
Type	Diaphragm
Designation	AC Delco XD
Feed pressure	42-70 kPa(0.42-0.70 bar)(6–10psi)
TD40KAE	
Type	Piston pump
Designation	Bosch FP
Feed pressure	140 - 160 kPa (1.4 - 1.6 bar) (20 –23 psi)
TD40GFE	
Type	Diaphragm
Designation	AC Delco XD
Feed pressure	100 - 200 kPa (0.42-0.70 bar)(15-29 psi)

Cold-starting device (optional extra)

TD40GA	
Thermostart	In induction manifold
TD40KAE	
Preheating coil	In induction manifold
TD40GFE	
Thermostart	In induction manifold

Turbocharger

TD40GA	
Designation	T31
TD40KAE	
Designation	T25
TD40GFE	
Designation	T25

Intercooler

TD40KAE only	Water-cooled with separate water pump

Cooling system

Type	Closed system
Radiator cap valve opens at	50 kPa (0.5 bar) (7.3 psi)

Thermostat

Type	Piston-type thermostat
Number of	1
Begins to open at	81 °C (113 °F)
Fully open at	95 °C (203 °F)
Pressure	50 kPa (7.3 psi)

Emissionsdata according to ISO 8178 C1, g/kwh	**TD40GA**	**TD40KAE**	**TD40GFE**
NOx	15,5	6,7	7,5
HC	1,0	0,22	0,36
CO	1,3	0,60	0,9
PM		0,26	0,36

Document Title:	Function Group:	Information Type:	Date:
Hydraulic system	**030**	**Service Information**	**4/16/2026**
Profile:			

Hydraulic system

Type	Power assisted of the "closed centre" type

Lifting cylinder

Type	Double-acting

Tilting cylinder

Type	Double-acting

Control valve

Shock valve, tilting rearward	30 ±0.8 MPa (300 ±8 bar) (4351 ±116 psi)
Shock valve, tilting forward	24 ±0.8 MPa (240 ±8 bar) (3480 ±116 psi)
Shock valve, lifting function	32 ±1.0 MPa (320 ±10 bar) (4641 ±145 psi)
Shock valves, 3rd function	21 ±0.8 MPa (210 ±8 bar) (3046 ±116 psi)
Max. pressure, 4th function	21 ±0.8 MPa (210 ±8 bar) (3046 ±116 psi)
Servo pressure	3 ±0.8 MPa (30 ±8 bar) (435 ±116 psi)
Back-up valve, return pressure	0.6 MPa (6 bar) (87 psi)

Hydraulic pump (in common with other hydraulics)

Type	Nine-cylinder axial piston pump, variable displacement
Working pressure (low idling)	26.0 ±0.4 MPa (260 ±4 bar) (3771 ±58 psi)
Stand-by pressure (low idling)	3.2 ±0.8 MPa (32 ±8 bar) (464 116 ±psi)
Flow at 36.7 r/s (2200 rpm) and 10 MP (1450 psi) pressure	117 litres (31 US gal) per minute (lifting, tilting and 3rd function) 40 litres (11 US gal) per minute (4th function)

Boom Suspension System

Pressure-reducing valve R1, closing pressure	20 MPa (200 bar) (2900 psi)
Pressure-reducing valve R2, closing pressure	12 MPa (120 bar) (1740 psi)
Safety valve TB, opening pressure	21 MPa (210 bar) (3046 psi)
Accumulator, precharging pressure	2 MPa (20 bar) (290 psi)

Document Title: **Power transmission**	Function Group: **030**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Power transmission

Pump

Type	**Nine-cylinder axial piston pump, variable displacement**
Feed pressure	**2.6 ±0.2 MPa (26 ±2 bar) (377 ±29 psi) at 2200 ±100 rpm (4622 ±210 Hz)**
Pressure cut-off	**42.6 ±1.0 MPa (426 ±10 bar) (6177 ±145 psi) at 2200 ±100 rpm (4622 ±210 Hz)**
Stall curve, start at	10 MPa (100 bar) (1450 psi) at 900 50 rpm (1891 105 Hz)
Stall curve	**40 MPa (400 bar) (5800 psi) at 1800 ±100 rpm (3782 ±210 Hz)**

Hydrostatic motor

Type	Bent axis motor, variable displacement
Change-over pressure, dynamic	26.5 MPa (265 bar) (3844 psi)
Change-over pressure, static (basic setting)	26.5 MPa (265 bar) (3844 psi)

Gearbox

Type	**Power Shift**
Designation	**HST-75**
Number of gears, forward/reverse	**2/2 (high/low)**
Gear-shifting system	**Electrical**
Clutch pressure, high/low gear	**2.00 – 2.15 MPa (20 – 21.5 bar)** (290 – 312 psi)
Lubricating oil pressure	**0.03 – 0.05 MPa (0.3 – 0.5 bar) (4.4 – 7.3 psi)**

Speed range

Low gear	**0 – 16 km/h** (0 – 9.9 mph)
High gear	**0 – 37 km/h (0 – 23.0 mph)**

With hydrostatic motor locked at max. displacement:

Low gear	**0 – 5 km/h (0 – 3.1 mph)**
High gear	**0 – 11 km/h (0 – 6.8 mph)**

Drive axles

Type	Fully floating drive shafts with hub reductions of the planetary gear type
Designation, front	AWB 10 (Product no. 23819)
Designation, front (with differential lock)	AWB 10 (Product no. 23836)
Designation, rear	AWB 10 (Product no. 23820)

Document Title: **Standard tightening torques**	Function Group: **030**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Standard tightening torques

The tightening torques in the following tables apply to bolts with a tensile strength as shown below.
The tables are to be considered as a general instruction for the tightening torque of nuts and bolts when no other torque is stated.

NOTE!
For flanged bolts type U6FS the values should be increased by 10 %.

Nuts and bolts should be cleaned and lubricated with oil.

TENSILE STRENGTH 8.8 Metric coarse and fine threads			
Threads	**N m**	**kgf m**	**lbf ft**
M6	10±2	1.0±0.2	7.4±1.5
M8	24±5	2.4±0.5	18±3.5
M10	48±10	4.8±1.0	35±7.4
M12	85±18	8.5±1.8	63±13.0
M14	140±25	14.0±2.5	103±18.0
M16	220±45	22.0±4.5	160±33.0
M20	430±85	43.0±8.5	320±63.0
M24	740±150	74.0±15.0	550±110.0

TENSILE STRENGTH 10.9 Metric coarse and fine threads			
Threads	**N m**	**kgf m**	**lbf ft**
M6	12±2	1.2±0.2	9±1.5
M8	30±5	3.0±0.5	22±3.5
M10	60±10	6.0±1.0	44±7.5
M12	105±20	10.5±2.0	78±14.5
M14	175±30	17.5±3.0	130±22
M16	275±45	27.5±4.5	204±33
M20	540±90	54.0±9.0	400±66
M24	805±160	80.5±16.0	594±118

UNC threads, coarse pitch			
Threads	**N m**	**kgf m**	**lbf ft**
1/4"	9±2	0.9±0.2	6.6±1.5
5/16"	18±4	1.8±0.4	13±3.0
3/8"	33±8	3.3±0.8	24±5.9
7/16"	54±14	5.4±1.4	40±10
1/2"	80±20	8.0±2.0	59±15
9/16"	120±30	12.0±3.0	89±22
5/8"	170±40	17.0±4.0	130±30

3/4"	300±70	30.0±7.0	220±52
7/8"	485±115	48.5±11.5	360±85

Document Title: **Standard tightening torques**	Function Group: **030**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Standard tightening torques

The tightening torques in the following tables apply to bolts with a tensile strength as shown below.
The tables are to be considered as a general instruction for the tightening torque of nuts and bolts when no other torque is stated.

NOTE!
For flanged bolts type U6FS the values should be increased by 10 %.
Nut and bolts should be cleaned and lubricated with oil.

TENSILE STRENGTH 8.8 Metric coarse and fine threads			
Threads	**N m**	**kgf m lbf ft**	**lbfft**
M6	10±2	1.0±0.2	7.4±1.5
M8	24±5	2.4±0.5	18±3.5
M10	48±10	4.8±1.0	35±7.4
M12	85±18	8.5±1.8	63±13.0
M14	140±25	14.0±2.5	103±18.0
M16	220±45	22.0±4.5	160±33.0
M20	430±85	43.0±8.5	320±63.0
M24	740±150	74.0±15.0	550±110.0

TENSILE STRENGTH 10.9 Metric coarse and fine threads			
Threads	**N m**	**kgf m lbf ft**	**lbfft**
M6	12±2	1.2±0.2	9±1.5
M8	30±5	3.0±0.5	22±3.5
M10	60±10	6.0±1.0	44±7.5
M12	105±20	10.5±2.0	78±14.5
M14	175±30	17.5±3.0	130±22
M16	275±45	27.5±4.5	204±33
M20	540±90	54.0±9.0	400±66
M24	805±160	80.5±16.0	594±118

UNC threads, coarse pitch			
Threads	**N m**	**kgf m lbf ft**	**lbfft**
1/4"	9±2	0.9±0.2	6.6±1.5
5/16"	18±4	1.8±0.4	13±3.0
3/8"	33±8	3.3±0.8	24±5.9
7/16"	54±14	5.4±1.4	40±10
1/2"	80±20	8.0±2.0	59±15
9/16"	120±30	12.0±3.0	89±22
5/8"	170±40	17.0±4.0	130±30
3/4"	300±70	30.0±7.0	220±52

7/8"	485±115	48.5±11.5	360±85

Document Title: **Steering**	Function Group: **030**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Steering

Type	Hydrostatic
Steering arc	±40°
Number of steering wheel revolutions, total	3.7 turns

Hydraulic pump (in common with other hydraulics)

Type	Nine-cylinder axial piston pump, variable displacement
Max. steering pressure (low idling)	21.0 ±0.5 MPa (210 ±5 bar) (3046 ±73 psi)
Stand-by pressure	3.2 ±0.8 MPa (32 ±8 bar) (464 ±116 psi)

Steering valve

Type	"Closed centre"

Shock valves

Number of valves	Two
Shock valve, opening pressure, idling	28 ±0.5 MPa (280 ±5 bar) (4061 ±73 psi)

Steering cylinder

Type	Double-acting

Document Title: **Tightening torques**	Function Group: **030**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Tightening torques

NOTE!
For bolted joints which are not listed here, see "Standard tightening torques" and the respective Function group.

Power transmission	**N m**	**kgf m (lbf ft)**
Lower gearbox mounting – gearbox	140	14.0 (103)
Lower gearbox mounting – frame	220	22.0 (163)
Upper gearbox mounting – gearbox	220	22.0 (163)
Upper gearbox mounting – frame	85	8.5 (63)
Hydraulic motor – gearbox	220	22.0 (163)
Front propeller shaft – gearbox	110	11.0 (81)
Rear propeller shaft – gearbox	110	11.0 (81)

Front axle	**N m**	**kgf m (lbf ft)**
Front axle – frame	466	46.6 (344)

Rear axle	**N m**	**kgf m (lbf ft)**
Rear axle, pin locking device	289	28.9 (213)

Propeller shafts	**N m**	**kgf m (lbf ft)**
Drive flanges, propeller shafts	110	11.0 (81)
Support bearing – frame	85	8.5 (63)

Wheels	**N m**	**kgf m (lbf ft)**
Wheel nuts	600 1323	60 (44)

Steering	**N m**	**kgf m (lbf ft)**
Pin locking devices – steering cylinders	(M8) 24 (M12) 85	2.4 (18) 8.5 (63)
Piston rod – piston	200	20 (148)
Piston rod guide – cylinder jacketl	200	20 (148)
Steering valve cover	30 – 35	3.0 – 3.5 (22 -26)

Frame joint	**N m**	**kgf m (lbf ft)**
Bearing housing – frame, lower	48	4.8 (35)
Bearing cover – shaft stud, upper	220	22.0 (163)

Bearing cover – frame	220	22.0 (163)
Bearing cover – shaft stud, lower	48	4.8 (35)

Counterweight	**N m**	**kgf m (lbf ft)**
Counterweight – frame	430 948	43 (317)
Towing hook – counterweight	430 948	43 (317)

Hydraulic system	**N m**	**kgf m (lbf ft)**
Hydraulic pump – hydrostatic pump	85	8.5 (63)
Pin locking devices – hydraulic cylinders	85	8.5 (63)
Hose and pipe unions (M8)	23	2.3 (17)
Hose and pipe unions (M10)	45	4.5 (33)
Piston rod guide – cylinder jacket up to incl. serial number. 9441	90	9.0 (66)
Piston rod guide – cylinder jacket w.e.fr. serial number. 9442	140	14.0 (103)

Cab	**N m**	**kgf m (lbf ft)**
Seat bracket – cab wall	48	4.8 (35)

Document Title:	Function Group:	Information Type:	Date:
Tightening torques	**030**	**Service Information**	**4/16/2026**
Profile:			

Tightening torques

NOTE!

For bolted joints which are not listed here, see “Standard tightening torques” and the respective Function group.

Engine and hydrostatic unit	**Nm**	**kgf m**	**lbf ft**
Flexible disc - flywheel	45	4.5	33
Flywheel housing - drive flange, pump	45	4.5	33
Water pump - engine	28	2.8	21
Water pump gear - hub	28	2.8	21
Hub - hydrostatic pump	70	7.0	52
Valve cover	30	3.0	22
Injection pump, hub nut, TD40GFE	105	10.5	77
Belly plate - frame	60	6.0	44
Injector - cylinder head	12	1.2	9
Valve cover	30	3.0	22
Cooling fan - hub	12	1.2	9
Injection pump, gear - drive flange, TD40KAE	45	4.5	33
Injection pump - engine, TD40GFE	28	2.8	21
Injection pump, gear - drive flange, TD40GFE	28	2.8	21
Big-end bearings, TD40GA	125	12.5	92
Big-end bearings, TD40KAE, GFE	15.5	15.5	114

Engine mountings	**Nm**	**kgf m**	**lbf ft**
Cylinder block - mounting	78	7. 8	58
Flywheel housing - mounting	78	7.8	58
Mounting - rubber damper	220	22.0	162
Rubber damper - frame	85	8.5	63

Gearbox	**Nm**	**kgf m**	**lbf ft**
Lower gearbox mounting - gearbox	140	14.0	103
Lower gearbox mounting - frame	220	22.0	162
Upper gearbox mounting - gearbox	220	22.0	162
Upper gearbox mounting - frame	85	8.5	63
Hydraulic motor - gearbox	220	22.0	162

Front axle	**Nm**	**kgf m**	**lbf ft**
Front axle - frame	466	46.6	344

Rear axle	**Nm**	**kgf m**	**lbf ft**
Rear axle, pin locking	289	28.9	213

Propeller shafts	**Nm**	**kgf m**	**lbf ft**
Drive flanges, propeller shafts	110	11.0	81

Support bearing - frame	85	8.5	63

Wheels

	Nm	kgf m	lbf ft
Wheel nuts	600	60	442

Steering (position of components)

	Nm	kgf m	lbf ft
Pin lockings - steering cylinders	(M8) 24	2.4	18
	(M12) 85	8.5	63
Piston rod - piston	850	85.0	627
Piston rod guide - cylinder barrel	79	7.9	58

Frame joint

	Nm	kgf m	lbf ft
Bearing housing - frame, lower	48	4,8	35
Bearing cover - shaft stud, upper	220	22.0	162
Bearing cover - frame	220	22.0	162
Bearing cover - shaft stud, lower	48	4,8	35

Counterweight

	Nm	kgf m	lbf ft
Counterweight - frame	430	43	317
Towing hook - counterweight	430	43	317

Hydraulic system

	Nm	kgf m	lbf ft
Hydraulic pump - hydrostatic pump	85	8.5	63
Pin lockings - hydraulic cylinders	85	8.5	63
Hose and pipe unions (M8)	45	4,5	33
Hose and pipe unions (M10)	45	4.5	33
Piston rod guide - cylinder barrel, s/n up to and incl. 9441	90	9.0	66
Piston rod guide - cylinder barrel, s/n w.e.fr. 9442	140	14.0	103

Cab

	Nm	kgf m	lbf ft
Seat bracket - cab wall	48	4.8	35

Document Title: **Time Guide**	Function Group: **070**	Information Type: **Service Information**	Date: **4/16/2026**
Profile:			

Time Guide

Regarding: L50C

16 Lubricants, fuels and other liquids

Op.no.	Time (h)	Operation
16234	1,75	Hydraulic oil tank, changing oil and filter excl. cleaning tank
16236	2,5	Hydraulic oil tank, changing oil and filter incl.cleaning tank
16238	0,75	Transmission, changing oil and filter and cleaning suction strainer
16259	1,5	Axles, changing oil

17 General

17101	0,5	Arrival inspection, according to programme
17102	1,5	Delivery inspection, according to programme
17202	3,5	Warranty inspection 100 hours, according to service programme
17204	7	Warranty inspection 1000 hours, according to service programme
17307	1,5	Maintenance service, every 250 hours
17310	3	Maintenance service, every 500 hours
17312	5	Maintenance service, every 1000 hours
17314	8	Maintenance service, every 2000 hours

21 Engine, general

21002	1,25	Compression test, engine at operating temperature
21070	8	Engine, removing
21071	30	Engine removed, general overhaul
21072	9	Engine, fitting
21102	7	Cylinder head, replacing gasket
21168	3	Cylinder heads all removed, decarbonizing and grinding in valves
21171	1	Cylinder head removed, pressure testing each
21211	0,5	Cylinder, cylinder heads removed, measuring wear in all cylinders
21310	14	Cylinder liner and piston, replacing one
21318	18	Cylinder liners and pistons, replacing all
21412	1	Valves, adjusting

21502	3	Timing gear cover, fitting new gasket in machine
21530	4	Timing gear, replacing in machine
21532	5	Timing gear case, fitting new gasket in machine
21614	2	Crankshaft, replacing front oil seal
21618	8	Crankshaft, replacing rear oil seal
21702	3,5	Sump gasket, replacing incl cleaning oil strainer

22 Lubrication and oil system

22106	4	Oil pressure relief valve, replacing
22306	1	Oil cooler, replacing

23 Fuel system, general

23301	0,25	Fuel system, bleeding
23302	0,5	Feed pump, replacing
23304	0,5	Feed pump, checking feed pressure
23314	0,5	Fuel filters all, replacing
23397	0,5	Feed pump removed, reconditioning
23410	3	Fuel tank, replacing
23601	0,75	Idling speed, checking and adjusting
23630	1,5	Injection timing, checking and adjusting
23670	3	Injection pump, removing
23672	4,5	Injection pump, fitting incl setting injection timing
23673	3	Injection pump, replacing incl setting injection timing
23675	6,5	Injection pump, replacing incl setting injection timing (low emission)
23702	1	Injectors, replacing all
23704	0,5	Injector, replacing one
23718	0,5	Delivery pipe, replacing one
23780	1,5	Injectors removed, reconditioning all

25 Inlet and exhaust systems

25102	1	Induction manifold, replacing gasket
25104	1	Exhaust manifold, replacing gasket
25220	1	Silencer, replacing
25221	0,5	Exhaust pipe, flexible tube, replacing
25571	1	Turbo charger, replacing
25573	2	Turbo charger removed, reconditioning
25602	0,5	Air cleaner, checking prssure drop indicator
25606	0,5	Pre-heating coil, replacing

26 Cooling system

26104	1	Coolant, changing

26108	1,25	Radiator, replacing
26112	0,5	Radiator hose upper, replacing
26114	0,5	Radiator hoses lower, replacing
26202	1,5	Coolant pump, replacing
26271	1	Coolant pump removed, reconditioning
26298	1	Thermostat, replacing
26312	0,5	Fan belt and/or alternator belt, replacing
26313	0,5	Fan belt and/or alternatorbelt, checking and adjusting tension
26322	0,5	Fan belt and/or alternator-, compressor belt, replacing all belts

27 Engine control

27321	0,5	Stop magnet, replacing

31 Battery and mounting parts

31102	1	Batteries, replacing
31103	0,5	Main switch, replacing
31106	0,5	Earth lead to battery, replacing
31108	0,75	Starter motor lead to battery, replacing

32 Alternator and charge regulator

32102	1	Alternator, replacing incl function check (no measuring instrument)
32125	0,5	Alternator, replacing carbon brush kit in machine
32205	0,5	Charging regulator, replacing

33 Starting system, general

33118	0,5	Starter motor, replacing
33401	0,5	Starter lock, replacing

35 Lighting

35224	0,5	Head lamp assy, replacing one incl adjusting
35316	0,5	Rear lamp, replacing one
35318	0,25	Rear lamp, replacing glass or bulb
35656	0,5	Work lighting, replacing one head lamp assy
35657	0,5	Work lighting, replacing one insert

36 Other electrical equipment, general

36102	0,5	Flasher unit, replacing relay
36110	0,75	Flasher switch, replacing
36117	0,5	Flasher lamp, replacing glass or bulb
36202	0,25	Horn, replacing
36203	0,5	Reverse alarm, replacing

36216	0,75	Horn switch, replacing
36301	0,5	Windscreen wiper rear, replacing motor
36302	0,75	Windscreen wiper front, replacing motor
36303	0,75	Windscreen wiper, replacing switch
36304	0,25	Windscreen flusher pump, replacing
36404	0,25	Switch, replacing
36408	0,25	Brake light switch, replacing
36720	0,5	ECU, replacing
36721	0,5	CU 8, replacing

38 Instruments, sender units, warning systems

38603	0,5	Transmission oil pressure sensor, replacing
38606	0,5	Engine temperature sensor, replacing
38607	0,5	Engine oil pressure sensor, replacing
38611	3,5	Fuel level sender, replacing
38613	0,5	Hydrostatic system temperature sensor, replacing
38614	0,5	Hydrostatic system oil pressure sensor, replacing
38705	0,5	Information display, replacing
38706	0,5	Engine temperature gauge, replacing
38711	0,5	Fuel level gauge, replacing
38713	0,5	Hydrostatic system temperature gauge, replacing
38720	0,5	Tachometer, replacing

39 Other equipment, e.g. radio and voltage conv.

39301	0,5	Voltage converter, replacing

42 Transmission, general

42102	0,75	Hydraulic transmission, check oil pressure
42147	0,75	Gear selector, replacing

43 Gearbox, mechanical

43402	1	Dropbox, replacing seal for front otput shaft
43404	1	Dropbox, replacing seal for rear output shaft
43416	1	Dropbox, oil pump, replacing
43429	12	Dropbox removed, reconditioning
43473	6	Dropbox, fitting
43474	5,5	Dropbox, removing

44 Hydraulic and hydrostatic drive (general)

44101	1	Hydrostatic system, checking oil

		pressure
44102	5	Hydraulic motor, replacing
44201	7	Hydraulic pump, replacing

45 Propeller shaft incl. bearings and mounting

45102	1,5	Support or intermediate bearing, replacing
45104	1	Propeller shaft, rear, replacing
45107	1	Propeller shaft, in frame joint, replacing
45110	1	Propeller shaft, front, replacing
45113	1	Propeller shaft, removed reconditioning

46 Drive axles, general

461	Null	Front axle
46101	3,5	Axle, replacing
46102	1,5	Axle, removing
46103	1,75	Axle, fitting
46105	1,5	Drive shaft, replacing one side
46113	15	Centre gear, axle removed, reconditioning
46114	1,75	Pinion front, fitting new gasket
46140	1	Hub retainer, replacing
46141	4,5	Hub retainer removed, reconditioning
46142	3,5	Hub retainer, reconditioning one side
46143	2,5	Hub, replacing seal
463	Null	Rear axle
46301	8	Axle, replacing
46302	3,5	Axle, removing
46303	4,5	Axle, fitting
46305	3,5	Drive shaft, replacing one side
46313	15	Centre gear, axle removed, reconditioning
46314	1,5	Pinion rear, fitting new gasket
46340	1	Hub retainer, replacing
46341	4,5	Hub retainer removed, reconditioning
46342	3,5	Hub retainer, reconditioning one side
46343	2,5	Hub, replacing seal

51 Wheel brake, all

516	Null	Front axle
51601	0,5	Brake linings, checking wear
51604	3	Brake discs, replacing on both sides
51650	1,5	Brake piston, replacing seals
517	Null	Rear axle
51701	0,5	Brake linings, checking wear
51704	3	Brake disc, replacing both sides
51750	1,5	Brake piston, replacing seals

52 Hydraulic brake system

52001	0,75	Brake system, checking function, hydraulic
52002	0,5	Brake system, checking function, retardation
52004	0,5	Brake system, adjusting unloading pressure
52005	0,5	Brake system, check and adjusting pressure in circuit
52037	1	Brake system, bleeding
52508	1,75	Foot brake valve, replacing
52509	1,25	Foot brake valve removed, reconditioning
52703	1,25	Accumulators, checking in machine

55 Parking brake incl.control system

55002	0,5	Parking brake, adjusting

64 Steering

64121	1,5	Adjustable steering column, replacing
64506	3	Steering cylinder, replacing
64515	0,5	Steering system, checking and adjusting standby pressure
64528	0,75	Steering system, checking and adjusting working pressure
64554	3,5	Steering cylinder, replacing link bearings
64560	2	Steering cylinder, repacking in machine
64573	3	Hydraulic pump removed ,reconditioning
64577	1,5	Steering cylinder removed, reconditioning incl replacing bearings
64581	1,75	Steering valve removed, reconditioning
64582	2	Steering valve, replacing
64793	1	Auxiliary steering, replacing hydraulic pump

74 Frame joint, general

74105	0,5	Frame joint, checking clearance
74136	12	Frame joint, replacing bearings

75 Axle suspension, general

75501	1	Axle suspension, measuring axial and radial clearanse
75502	1	Axle suspension, adjusting axial clearance
75503	9,5	Axle suspension, replacing bushes and seals

77 Wheel, Tyre, Hub, Crawler/Track

77101	0,5	Wheel, removing and fitting

81 Cab, general

81815	1	Cab suspension, rubber element replacing

83 Doors and Covers

83104	1,75	Door, replacing
83106	0,5	Door lock, replacing
83114	0,5	Door, replacing sealing strip

84 Outside trim parts, Glass, Sealing, Mouldings

84302	6	Windscreen, replacing
84312	1	Rear window, replacing
84313	1	Side windov, replacing
84348	1	Door window, replacing

87 Air Conditioning unit

87304	1	Radiator, replacing
87306	1	Fan motor, replacing
87308	0,75	Heat control valve, replacing
87309	0,75	Heat control, replacing
87402	1	Refrigerant, draining
87403	1	Cooling unit, performance test
87405	1,75	Refrigerant, filling excl vacuum pumping
87406	4	Compressor, replacing incl draining and filling
87407	1	V-belt, replacing
87410	3,5	Condenser, replacing incl draining and filling
87411	3	Receiver, replacing incl draining and filling
87412	4	Evaporator, replacing incl draining and filling
87413	3,5	Expansion valve, replacing incl draining and filling
87414	1	Thermostat, replacing
87415	1	Compressor, replacing shaft seal (compressor removed)
87416	1	Compressor, replacing magnetic clutch (compressor removed)
87417	1,75	Compressor, replacing magnetic clutch in machine
87419	0,5	Compressor, replacing valve plate (compressor removed)

91 Working hydraulic and servo system

91105	3	Hydraulic tank, replacing inlet hose for

		pump
91111	1,25	Oil cooler, replacing
91138	5	Hydraulic oil tank, replacing
91201	2	Control valve, replacing
91202	2	Control valve removed, reconditioning
91209	1	Shock valve, tilt function, checking and adjusting
91211	1	Shock valve lift function, adjusting
91230	2	Central valve, replacing
91303	0,25	Oil pump, checking and adjusting standby pressure
91304	0,25	Oil pump, checking and adjusting working pressure
91310	4	Oil pump, replacing
91311	3	Oil pump removed, reconditioning
91454	0,5	Servo valve, adjusting control
91455	0,5	Servo pressure, checking and adjusting
91458	1	Servo valve, replacing
91463	0,5	Servo pressure, checking by spool valve in control valve
91601	0,5	Boom suspension system, checking function
91602	0,75	Accumulator, check and adjusting
91603	1	Accumulator, reconditioning
91604	1,5	Boom suspension system, checking closing pressure
91605	1	Boom suspension system, checking opening pressure

94 Unit for load handling

94502	1	Lift frame, replacing bearing in lower bucket- or implement attachment
94503	0,5	Implement attachment, measuring clearence of lower bearing
94504	2	Lift cylinder, replacing
94505	3	Lift cylinder, repacking in machine
94506	2	Lift cylinder removed, repacking
94507	0,75	Tilt cylinder removed, replacing bearings "E-F"
94508	2	Tilt cylinder, replacing
94509	2	Tilt cylinder, repacking in machine
94510	1	Tilt cylinder removed, repacking
94511	1	Implemental attachment, replacing hydraulic cylinder
94512	1	Lift cylinder removed, replacing bearings "C-P"
94516	4	Lift frame, replacing bearing in upper mounting "O"
94524	1,5	Tilt cylinder, replacing bearing in machine "E-F"
94545	1	Implemental attachment/bucket

		attachment, replacing bushes "A"
94554	0,75	Implement attachment, replacing
94556	1	Implement attachment, repacking removed hydraulic cylinder
94562	1	T-link upper, replacing "HIJ"
94563	0,75	T-link upper removed, replacing bearings "HIJ"
94564	1,5	T-link, lower, replacing "IB"
94565	1	T-link lower removed, replacing bearing "IB"
94566	1	Tilt link, replacing "GH"
94567	0,75	Tilt link removed, replacing bearings "GH"
94568	3	Tilt arm, replacing bearing "GDF"
94569	2	Tilt arm, replacing "GDF"
94570	0,75	Tilt arm removed, replacing bearing "GDF"