

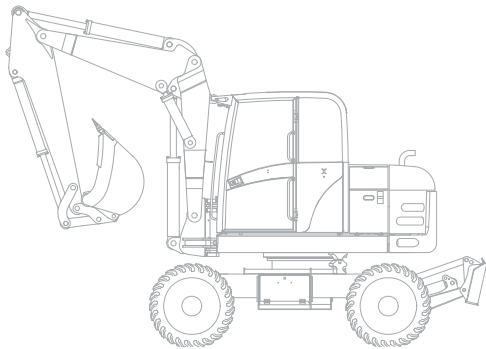


TEREX®

TW 85 SERVICE - MANUAL

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PRESSURE AND SETTING VALUES	travel	up to Se. No. TL00801878
Suction pressure:	max. bar	0.5 ^{±0.1}
Charge pressure (high idle):	bar	30 ^{±1}
High pressure (SV):	bar	480
Pressure cut-off:	bar	450
Case pressure at + 50° C:	max. bar	2.5
Regulation start:	bar	230
Start-up speed:	min ⁻¹	1,150
Engine stalling (rabbit) - dynamic:	min ⁻¹	2,000 ⁻¹⁰⁰ at 220 bar HP
Brake inching beginning / end:	bar	5 - 13
Pressure switch (hydrostatic brake):	bar	22

PRESSURE AND SETTING VALUES	travel	from Se. No. TL00801879
Suction pressure:	max. bar	0.5 ^{±0.1}
Charge pressure (high idle):	bar	30 ^{±1}
High pressure (SV):	bar	430
Pressure cut-off:	bar	410
Case pressure at + 50° C:	max. bar	2.5
Regulation start:	bar	2,100 ⁻⁵⁰ at 200 bar HP
		(see setting instructions, chapter 5, measuring method 2)
Start-up speed:	min ⁻¹	1,150
Engine stalling (rabbit) - dynamic:	min ⁻¹	2,000 ⁻¹⁰⁰ at 220 bar HP
Brake inching beginning / end:	bar	5 - 13
Pressure switch (hydrostatic brake):	bar	22

STEERING

Steering unit:	type	Rexroth LAGC100-15/LD 240-1
Steering pump:	make	Cassappa
Displacement:	cm ³ /rev:	27
Steering pressure (high idle):	bar	175
Priority valve:	type	Rexroth LPS80RM/LD7-643-0

WORKING HYDRAULICS

Working pump:	make	Cassappa
Displacement:	l/min.	64
Servo-controlled valve:	type	Brown PRSV
up to Se. No. TL00801821 without 1815 to 1819		
Valve bank:	type	Parker P 70
from Se. No. TL00801822 with 1815 to 1819		
Valve bank:	type	Bucher HDM19

PRESSURE AND SETTING VALUES	working	
Main pressure relief valve (high idle):	max. bar	250
Line relief pressures:		
- lifting frame lift:	bar	280
- lifting frame lower:	bar	anti-cavitation
- shovel dump in:	bar	280
- shovel dump out:	bar	130
- additional control circuit:	bar	230 / 230
- pilot pressure (charge pressure):	bar	30 ^{±1}

WORKING CYCLES

Lifting frame lift:	s	4.7
Lifting frame lower:	s	3.2
Shovel dump in:	s	---
Shovel dump out:	s	---

AXLES

up to Se. No. TL00801878

Front axle with self-locking differential - 20 km/h-version:	make/type	ZF / AP – R – 715 or MT-L 3015
Rear axle with self-locking differential - 20 km/h-version:	make/type	ZF / AP – R – 715 or MT-L 3015
Front axle with self-locking differential - 36 km/h-version:	make/type	ZF / AP – R – 715 or MT-L 3015
Rear axle with self-locking differential - 36 km/h-version:	make/type	ZF / AP – R – 715 or MT-L 3015

AXLES

from Se. No. TL00801879

Front axle with self-locking differential - 20 km/h-version:	make/type	ZF / AP – R – 720 or MT-L 3020
Rear axle with self-locking differential - 20 km/h-version:	make/type	ZF / AP – R – 720 or MT-L 3020
Front axle with self-locking differential - 36 km/h-version:	make/type	ZF / AP – R – 720 or MT-L 3020
Rear axle with self-locking differential - 36 km/h-version:	make/type	ZF / AP – R – 720 or MT-L 3020

BRAKE SYSTEM

Service brake:		hydraulically operated drum brake, front axle
Parking brake:		drum brake at the front axle
Master cylinder:	make	ATE (mineral oil)

LUBRICANTS

Engine:		see engine instruction book
Hydraulic oil:		see TEREX hydraulic oil recommendation table
Transmission oil:		MIL-L 2105 B or API-GL 5 resp., SAE 85 W 90 LS or SAE 90 LS
Multi-purpose grease:		acc. to DIN 51825. Dripping point over 170° C. Lithium-saponified.
Brake medium:		ATF type A Suffix A or Dexron II D

MAINTENANCE PARTS

see instruction book

CAPACITIES

litr.

Engine oil with oil filter - change:	approx. 9.0	engine oil
Hydraulic oil (tank and system) - first filling:	approx. 55.0	hydraulic oil
Hydraulic oil tank (change):	approx. 46.0	hydraulic oil
Fuel tank:	approx. 75.0	diesel
Front axle - central housing:	approx. 4.0	transmission oil
Front axle - wheel hub:	approx. 0.3	transmission oil, each
Rear axle - central housing and reduction gearbox:	approx. 4.5	transmission oil
Rear axle - wheel hub:	approx. 0.3	transmission oil, each
Service brake:	approx. 0.25	ATF oil
Coolant fluid	approx. 15,0	water with anti-corrosive and anti-freeze agent

(Gramm)

Air condition:	approx. 800 (1.764 lb)	R134a
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DIESEL ENGINE Tier 3

Manufacturer:		Deutz
Type:		D 2011 L04W
Performance according to (ECE-R24/ISO1585/ISO9249):	kW	44 at 2,200 min ⁻¹
Construction:		4 cylinders in line
Cooling:		water
Injection:		direct injection
Capacity:	cm ³	3,600
High idle:	min ⁻¹	2,350 ⁺⁵⁰
Low idle:	min ⁻¹	850 ⁺⁵⁰
Spec. fuel consumption under full load:	g/kWh	225
Tappet clearance - inlet cold:	mm	0.30
Tappet clearance - outlet cold:	mm	0.50
Torque of cylinder head studs (only in case of repair):	Nm	30 / 80 / 160
Further data:		Tightening angle 90° see engine instruction book or chapter 3

ELECTRICAL SYSTEM

Voltage:	V	12
Battery:	V/Ah/A	12 / 100 / 900 (EN)
Generator:	V/A	14 / 95
Starter:	V/kW/PS	12 / 2.6 / 3.5
Cold start aid:		heater plug
Lighting:		acc. to German motor vehicle construction and use regulation ("StVZO") and Euronorm. H4 halogen headlamp. Two working lights at the front.

TRANSMISSION

Travel pump:	type	A 4 VG 56 DA with pressure cut-off
Displacement:	max. cm ³ /rev.	56
Travel motor 20/36 km/h version:	type/make	A6VM80 / Hydromatik (max 80 cm ³ /rev.)

TRAVEL RANGE

Two/ four pre-selectable travel ranges, electro-hydraulically controlled:

TL 80:	20 km/h - version:			
	tortoise / rabbit	km/h	0 to 7.0	/ 0 to 20
TL 80 S:	36 km/h - version:			
	Gearbox position 1, tortoise / rabbit:	km/h	0 to 7.0	/ 0 to 18
	Gearbox position 2, tortoise / rabbit:	km/h	0 to 14	/ 0 to 36

Cardan shaft rev. at **20 km/h - version** and standard tyres

		adjustment at nominal speed / Rabbit
	min ⁻¹	2,200
Cardan shaft rev. at 36 km/h - version	min ⁻¹	3,600

PRESSURE AND SETTING VALUES

travel

Suction pressure:	max. bar	0.5 ^{±0.1}
Charge pressure (high idle):	bar	30 ^{±1}
High pressure (SV):	bar	430
Pressure cut-off:	bar	410
Case pressure at + 50° C:	max. bar	2.5
Regulation start:	bar	2,100 ⁻⁵⁰ at 200 bar HP
	(see setting instructions, chapter 5, measuring method 2)	
Start-up speed:	min ⁻¹	1,150
Engine stalling (rabbit) - dynamic:	min ⁻¹	2,000 ⁻¹⁰⁰ at 220 bar HP
Brake inching beginning / end:	bar	5 - 13
Pressure switch (hydrostatic brake):	bar	22

STEERING

Steering unit:	type	Rexroth LAGC100-15/LD 240-1
Steering pump:	make	Cassappa
Displacement:	cm ³ /rev:	27
Steering pressure (high idle):	bar	175
Priority valve:	type	Rexroth LPS80RM/LD7-643-0

WORKING HYDRAULICS

Working pump:	make	Cassappa
Displacement:	l/min.	64
Servo-controlled valve:	type	Brown PRSV
Valve bank:	type	Bucher HDM19

PRESSURE AND SETTING VALUES

working

Main pressure relief valve (high idle):	max. bar	250
Line relief pressures:		
- lifting frame lift:	bar	280
- lifting frame lower:	bar	anti-cavitation
- shovel dump in:	bar	280
- shovel dump out:	bar	130
- additional control circuit:	bar	230 / 230
- pilot pressure (charge pressure):	bar	30 ^{±1}

WORKING CYCLES

Lifting frame lift:	s	4.7
Lifting frame lower:	s	3.2
Shovel dump in:	s	---
Shovel dump out:	s	---

AXLES

Front axle with self-locking differential - 20 km/h-version:	make/type	ZF MT-L 3020
Rear axle with self-locking differential - 20 km/h-version:	make/type	ZF MT-L 3020
Front axle with self-locking differential - 36 km/h-version:	make/type	ZF MT-L 3020
Rear axle with self-locking differential - 36 km/h-version:	make/type	ZF MT-L 3020

BRAKE SYSTEM

Service brake:		hydraulically operated disc brake, front axle
Parking brake:		disc brake at the front axle
Master cylinder:	make	ATE (mineral oil)

LUBRICANTS

Engine:		see engine instruction book
Hydraulic oil:		see TEREX hydraulic oil recommendation table
Transmission oil:		MIL-L 2105 B or API-GL 5 resp., SAE 85 W 90 LS or SAE 90 LS
Multi-purpose grease:		acc. to DIN 51825. Dripping point over 170° C. Lithium-saponified.
Brake medium:		ATF type A Suffix A or Dexron II D

MAINTENANCE PARTS

see instruction book

CAPACITIES

ltr.

Engine oil with oil filter - change:	approx. 9.0	engine oil
Hydraulic oil (tank and system) - first filling:	approx. 55.0	hydraulic oil
Hydraulic oil tank (change):	approx. 46.0	hydraulic oil
Fuel tank:	approx. 75.0	diesel
Front axle - central housing:	approx. 4.0	transmission oil
Front axle - wheel hub:	approx. 0.3	transmission oil, each
Rear axle - central housing and reduction gearbox:	approx. 4.5	transmission oil
Rear axle - wheel hub:	approx. 0.3	transmission oil, each
Service brake:	approx. 0.25	ATF oil
Coolant fluid	approx. 15,0	water with anti-corrosive and anti-freeze agent

(Gramm)

Air condition:	approx. 800 (1.764 lb)	R134a
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DIESEL ENGINE

Manufacturer:		Deutz
Type:		F4M 2011
Performance according to (ECE-R24/ISO1585/ISO9249):	kW	44 at 2,400 min ⁻¹
Construction:		4 cylinders in line
Cooling:		external oil cooling
Injection:		direct injection
Capacity:	cm ³	3,100
High idle:	min ⁻¹	2,550 ⁺⁵⁰
Low idle:	min ⁻¹	850 ⁺⁵⁰
Spec. fuel consumption under full load:	g/kWh	218
Tappet clearance - inlet cold:	mm	0.30
Tappet clearance - outlet cold:	mm	0.50
Torque of cylinder head studs (only in case of repair):	Nm	30 / 80 / 160
Further data:		Tightening angle 90° see engine instruction book

ELECTRICAL SYSTEM

Voltage:	V	12
Battery:	V/Ah/A	12 / 80 / 720 (EN)
Generator:	V/A	14 / 95
Starter:	V/kW/PS	12 / 2.3 / 3.1
Cold start aid:		heater plug
Lighting:		acc. to German motor vehicle construction and use regulation ("StVZO") and Euronorm. H4 halogen headlamp. Two working lights at the front. Two working lights at the rear (option)

TRANSMISSION

Travel pump:	type	A 4 VG 56 DA with pressure cut-off
Displacement:	max. cm ³ /rev.	56
Travel motor (20 km/h):	type/make	A 6 VM 80 DA 2
Displacement :	max. cm ³ /rev.	80

TRAVEL RANGE 20 km/h :

Tortoise / rabbit	km/h	0 to 7.0 / 0 to 20
Cardan shaft rev.		adjustment at nominal speed tortoise / rabbit
and standard tyres	12,5-20:	min ⁻¹ 650 / 1,865
	340/80 R20:	min ⁻¹ 650 / 1,830
	405/70 R18:	min ⁻¹ 650 / 1,850

PRESSURE AND SETTING VALUES

Suction pressure:	max. bar	0.5 ^{±0.1}
Charge pressure (high idle):	bar	30 ^{±1}
High pressure (SV):	bar	480
Pressure cut-off:	bar	450
Case pressure at + 50° C:	max. bar	2.5
Regulation start:	min ⁻¹	2300 ⁻⁵⁰ at 180 bar HP (see setting instructions, chapter 5, measuring method 2)
Start-up speed:	min ⁻¹	1,150
Engine stalling (rabbit) - dynamic:	min ⁻¹	2,200 ⁻¹⁰⁰ at 220 bar HP
Brake inching beginning / end:	bar	5 - 13
Pressure switch (hydrostatic brake):	bar	22 (see setting instructions,chapter 5,measuring method 2)

STEERING

Steering unit:	type	Rexroth LAGC100-15/LD240-1
Steering pump:	make	Cassappa
Displacement:	cm ³ /rev:	27
Steering pressure (high idle):	bar	175
Priority valve:	type	Rexroth LPS80RM/LD7-643/0

WORKING HYDRAULICS

Working pump:	make	Cassappa
Displacement:	l/min.	64
Valve bank:	type	Walvoil SDM 100/3

PRESSURE AND SETTING VALUES

Main pressure relief valve (high idle):	max. bar	250
Line relief pressures:		
- lifting frame lift:	bar	280
- lifting frame lower:	bar	anti-cavitation
- shovel dump in:	bar	280
- shovel dump out:	bar	130
- additional control circuit:	bar	230 / 230

WORKING CYCLES

Lifting frame lift:	s	6.2
Lifting frame lower:	s	4.4
Shovel dump in:	s	3.0
Shovel dump out:	s	3.8

AXLES

Front axle with self-locking differential - 20 km/h-version:	make/type	Dana 211/111
Rear axle with self-locking differential - 20 km/h-version:	make/type	Dana 311/211/174

BRAKE SYSTEM

Service brake:		hydraulically operated drum brake, front axle
Parking brake:		drum brake at the front axle
Master cylinder:	make	ATE (mineral oil)

LUBRICANTS

Engine:		see engine instruction book
Hydraulic oil:		see TEREX hydraulic oil recommendation table
Transmission oil:		MIL-L 2105 B or API-GL 5 resp., SAE 85 W 90 LS or SAE 90 LS
Multi-purpose grease:		acc. to DIN 51825. Dripping point over 170° C. Lithium-saponified.
Brake medium:		ATF type A Suffix A or Dexron II D

MAINTENANCE PARTS

see instruction book

CAPACITIES

ltr.

Engine oil with oil filter and oil cooler - change:	approx. 14.0	engine oil
Hydraulic oil (tank and system) - first filling:	approx. 70.0	hydraulic oil
Hydraulic oil tank (change):	approx. 46.0	hydraulic oil
Fuel tank:	approx. 70.0	diesel
Front axle - central housing:	approx. 4.0	transmission oil
Front axle - wheel hub:	approx. 0.3	transmission oil, each
Rear axle - central housing and reduction gearbox:	approx. 4.5	transmission oil
Rear axle - wheel hub:	approx. 0.3	transmission oil, each
Service brake:	approx. 0.25	ATF oil



DIESEL ENGINE Tier 3

Manufacturer:		Deutz
Type:		D 2011 L04W
Performance according to (ECE-R24/ISO1585/ISO9249):	kW	44 at 2,400 min ⁻¹
Construction:		4 cylinders in line
Cooling:		water
Injection:		direct injection
Capacity:	cm ³	3,600
High idle:	min ⁻¹	2,350 ⁺⁵⁰
Low idle:	min ⁻¹	850 ⁺⁵⁰
Spec. fuel consumption under full load:	g/kWh	225
Tappet clearance - inlet cold:	mm	0.30
Tappet clearance - outlet cold:	mm	0.50
Torque of cylinder head studs (only in case of repair):	Nm	30 / 80 / 160
Further data:		Tightening angle 90° see engine instruction book

ELECTRICAL SYSTEM

Voltage:	V	12
Battery:	V/Ah/A	12 / 80 / 720 (EN)
Generator:	V/A	14 / 95
Starter:	V/kW/PS	12 / 2.3 / 3.1
Cold start aid:		heater plug
Lighting:		acc. to German motor vehicle construction and use regulation ("StVZO") and Euronorm. H4 halogen headlamp. Two working lights at the front (option) Two working lights at the rear (option)

TRANSMISSION

Travel pump:	type	A 4 VG 56 DA with pressure cut-off
Displacement:	max. cm ³ /rev.	56
Travel motor (20 km/h):	type/make	A 6 VM 80 DA 2
Displacement :	max. cm ³ /rev.	80

TRAVEL RANGE 20 km/h :

Tortoise / rabbit	km/h	0 to 7.0 / 0 to 20
Cardan shaft rev.		adjustment at nominal speed tortoise / rabbit
and standard tyres	12,5-20:	min ⁻¹ 650 / 1,865
	340/80 R20:	min ⁻¹ 650 / 1,830
	405/70 R18:	min ⁻¹ 650 / 1,850

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