Document Title: **Machine view**	Function Group: **000**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Machine view

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo			

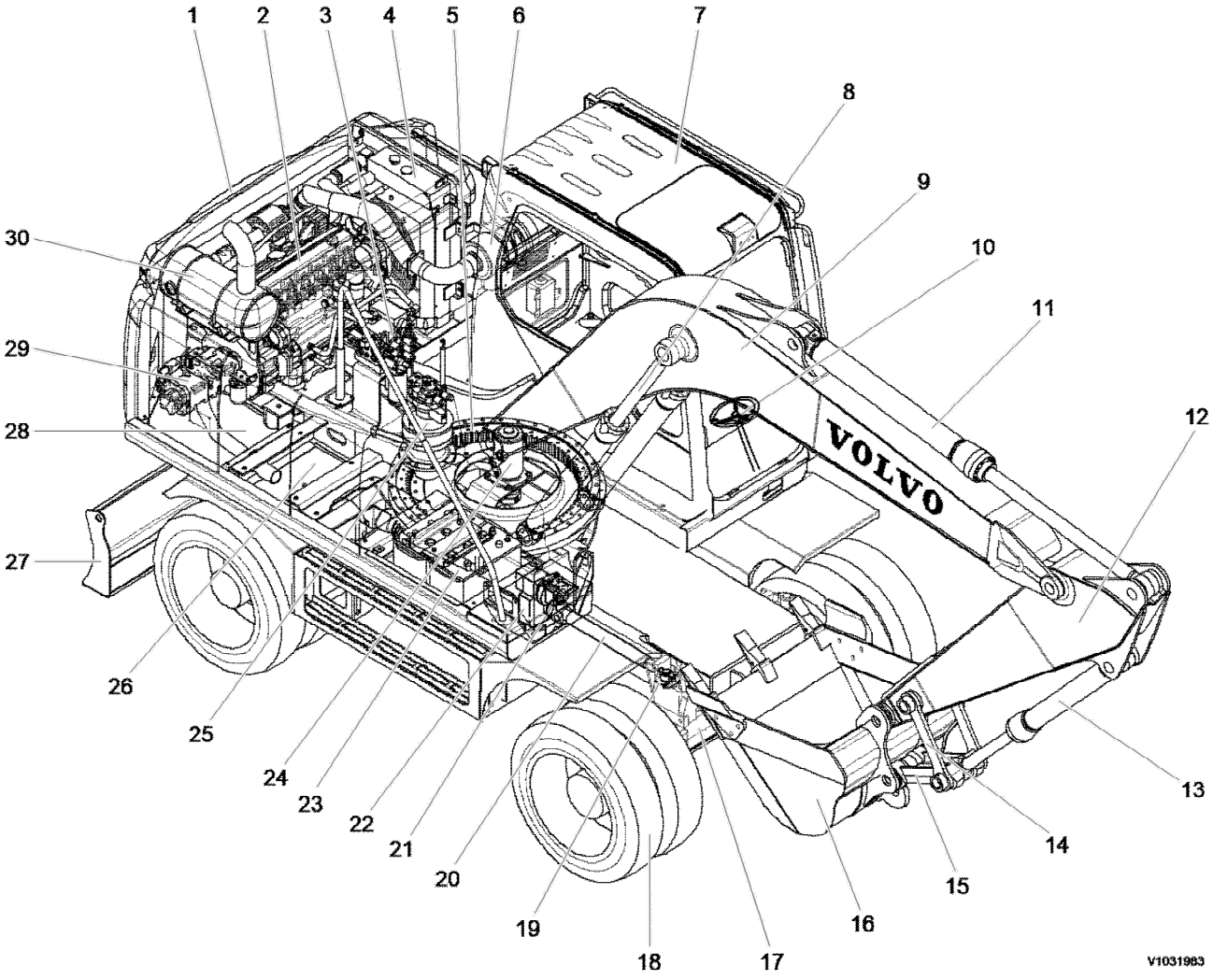


Figure 1
Location of components

1	Counterweight	11	Arm cylinder	21	Travel motor
2	Engine	12	Arm	22	Transfer gearbox
3	Main control valve	13	Bucket cylinder	23	Battery
4	Radiator and oil cooler	14	Link	24	Center passage

5	Slew ring gear	15	Connecting rod	25	Slew motor and gearbox
6	Air cleaner	16	Bucket	26	Fuel tank
7	Operator cab	17	Axle	27	Dozer blade
8	Boom cylinder	18	Tire	28	Hydraulic tank
9	Boom	19	Axle locking cylinder	29	Hydraulic pump
10	Steering wheel	20	Propeller shaft	30	Muffler

Document Title: **Volvo standard tightening torques**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Volvo standard tightening torques

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo			

The tightening torques in the following tables apply to bolts and nuts with tensile strength. The tables should be used as a general instruction for tightening bolts and nuts without specified values. The charts contains values for course thread bolts and nuts.
Torque values should be increased with ≈10%, for flange bolts.
All standard torques for bolts are without surface treatment.
The standard torque for bolts lubricated with oil should be reduced with 20% of the given value.

Standard tightening torque charts

Bolt size Metric Coarse Threads	**Tensile strength 8.8**		**Tensile strength 10.9**	
	(Nm)	**(lbf ft)**	**(Nm)**	**(lbf ft)**
M5	6	4	8	6
M6	10	7	14	11
M8	25	18	35	26
M10	50	37	70	52
M12	87	64	122	90
M14	139	103	195	144
M16	213	157	299	220
M18	293	216	413	305
M20	416	307	585	432
M24	719	530	1010	745
M27	1060	782	1490	1100
M30	1140	840	2025	1493
M36	2500	1844	3600	2653

Bolt size Inch SAE Coarse Threads	**Tensile strength 5**		**Tensile strength 8**	
	(lbf ft)	**(Nm)**	**(lbf ft)**	**(Nm)**
1/4	10	13,6	14	19
5/16	21	28,5	29	39,3
3/8	37	50,2	52	70
7/16	59	80	84	114
1/2	90	122	128	174
9/16	130	176	184	250
5/8	180	244	254	345

3/4	320	434	451	612
7/8	515	700	728	988
1	775	1052	1091	1480
1 1/8	953	1290	1545	2100
1 1/4	1344	1823	2180	2960
1 3/8	1600	2170	2650	3600
1 1/2	2000	2714	3200	4340

Hydraulic connections, general

Before fitting pipe couplings, plugs and hoses:

- Make sure that the sealing surfaces are clean and free from pores or scratches.
- Check elastic seal rings for defects.
- Oil in threads, sealing surfaces and contact surfaces except for ORFS-connections (ORFS = O-Ring Face Seal).

Applying Torque correction factor by tool angle

Correction factor		
Tool angle	**ORFS**	**Stud-end**
Allowable tolerance	±10%	- 0%, +10%
±0˚ ~ ±30˚	5% over torque	
±30˚ ~ ±45˚	20% over torque	
±45˚	NOT allowable	

Tool access angle

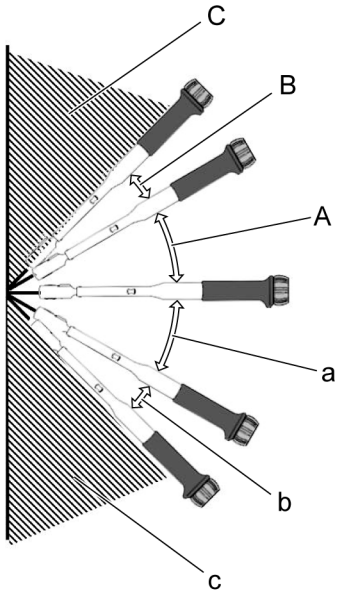


Figure 1
Tool access angle

A: +0˚ ~ +30˚

B: +30˚ ~ +45˚

C: +45˚

a: -0˚ ~ -30˚

b: -30˚ ~ -45˚

c: -45˚

ORFS female swivel fitting

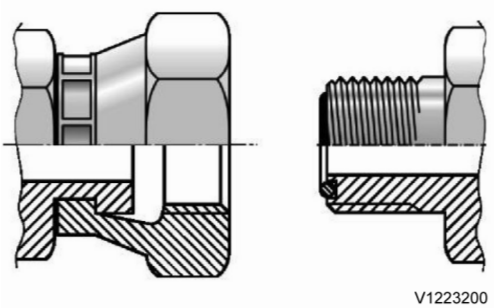


Figure 2

Threads type	Assembly position	Threads	Standard torque		±0˚ ~ ±30˚		±30° ~ ±45°	
			(Nm)	(lbf ft)	(Nm)	(lbf ft)	(Nm)	(lbf ft)
UN-UNF	ORFS	UNF 9/16-18	29 ±3	21.4 ±2.2	30.5 ±3.1	22.1 ±2.2	36.5 ±3.7	26.9 ±2.7
		UN 11/16-16	44 ±4	32.5 ±3.0	46.2 ±4.6	34.1 ±3.4	55.4 ±5.5	40.9 ±4.1
		UN 13/16-16	63 ±6	46.5 ±4.4	66.2 ±6.6	48.8 ±4.9	79.4 ±7.9	58.6 ±5.9
		UNS 1-14	106 ±8	78.2 ±5.9	111.3 ±11.1	82.1 ±8.2	133.6 ±13.4	98.5 ±9.9
		UN 1 3/16-12	140 ±12	103.3 ±8.9	147.0 ±14.7	108.4 ±10.8	176.4 ±17.6	130.1 ±13.0
		UN 1 7/16-12	175 ±15	129.1 ±11.1	183.8 ±18.4	135.6 ±13.6	220.5 ±22.1	162.6 ±16.3
		UN 1 11/16-12	270 ±20	199.1 ±14.8	283.5 ±28.4	209.1 ±20.9	340.2 ±34.0	250.9 ±25.1
	Stud-end	UNF 7/16-20	21 +2.1	15.4 +1.5	22.1 +2.2	16.3 +1.6	26.5 +2.7	19.5 +2.0
		UNF 1/2-20	37 +3.7	27.3 +2.7	38.9 +3.9	28.7 +2.9	46.6 +4.7	34.4 +3.4
		UNF 9/16-18	47 +4.7	34.7 +3.5	49.4 +4.9	36.4 +3.6	59.2 +5.9	43.7 +4.4
		UNF 3/4-16	81 +8.1	59.7 +6.0	85.1 +8.5	62.8 +6.3	102.1 +10.2	75.3 +7.5
		UNF 7/8-14	141 +14.1	104.0 +10.4	148.1 +14.8	109.2 +10.9	177.7 +17.8	131.1 +13.1
		UN 1 1/16-12	189 +18.9	139.4 +13.9	198.5 +19.9	146.4 +14.6	238.1 +23.8	175.6 +17.6
		UN 1 5/16-12	284 +28.4	209.5 +21.0	298.2 +29.8	219.9 +22.0	357.8 +35.8	263.9 +26.4
		UN 1 5/8-12	347 +34.7	255.9 +25.6	364.4 +36.4	268.8 +26.9	437.2 43.7	322.5 +32.3

	UN 1 7/8-12	425 +42.5	313.5 +31.4	446.3 +44.6	329.2 +32.9	535.5 +53.6	395.0 +39.5

G thread 30˚ cone female swivel fitting

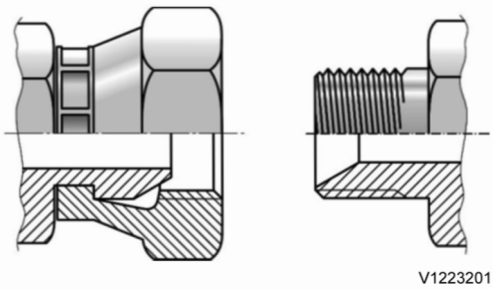


Figure 3

Threads type	Assembly position	Threads	Standard torque		±0˚ ~ ±30˚		±30° ~ ±45°	
			(Nm)	(lbf ft)	(Nm)	(lbf ft)	(Nm)	(lbf ft)
PF	ORFS	G 1/4-19	25 ±2.5	18.4 ±1.8	26.3 ± 2.6	19.4 ±1.9	31.5 ±3.2	23.2 ±2.3
		G 3/8-19	49 ±4.9	36.1 ±3.6	51.5 ± 5.2	38.0 ±3.8	61.7 ±6.2	45.5 ±4.6
		G 1/2-14	59 ±5.9	43.5 ±4.4	62.0 ± 6.2	45.7 ±4.6	74.3 ±7.4	54.8 ±5.5
		G 3/4-11	119 ±11.9	87.8 ±8.8	125.0 ±12.5	92.2 ±9.2	149.9 ±15.0	110.6 ±11.1
		G 1-11	140 ±14	103.3 ±10.3	147.0 ±14.7	108.4 ±10.8	176.4 ±17.6	130.1 ±13.0
		G 1 1/4-11	173 ±17.3	127.6 ±12.8	181.7 ±18.2	134.0 ±13.4	218.0 ±21.8	160.8 ±16.1
		G 1 1/2-11	205 ±20.5	151.2 ±15.1	215.3 ±21.5	158.8 ±15.9	258.3 ±25.8	190.5 ±19.1
	Stud-end	G 1/8-19	22 +2.2	16.2 +1.6	23.1 +2.3	17.0 +1.7	27.7 +2.8	20.4 +2.0
		G 1/4-19	52 +5.2	38.4 +3.8	54.6 +5.5	40.3 +4.0	65.5 +6.6	48.3 +4.8
		G 3/8-19	85 +8.5	62.7 +6.3	89.3 +8.9	65.9 +6.6	107.1 +10.7	79.0 +7.9
		G 1/2-14	105 +10.5	77.4 +7.7	110.3 +11.0	81.4 +8.1	132.3 +13.2	97.6 +9.8
		G 3/4-11	210 +21	154.9 +15.5	220.5 +22.1	162.6 +16.3	264.6 +26.5	195.2 +19.5
		G 1-11	400 +40	295.0 +29.5	420.0 +42.0	309.8 +31.0	504.0 +50.4	371.7 +37.1
		G 1 1/4-11	525 +52.5	387.2 +38.7	551.3 +55.1	406.6 +40.7	661.5 +66.2	487.9 +48.8
		G 1 1/2-11	630 +63.1	464.7 +46.5	661.5 +66.2	487.9 +48.8	793.8 +79.4	585.5 +58.6

Document Title: **Measurement conversion tables**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Measurement conversion tables

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo			

Length

Unit	**cm**	**m**	**km**	**in**	**ft**	**yd**	**mile**
cm	1	0.01	0.00001	0.3937	0.03281	0.01094	0.000006
m	100	1	0.001	39.37	3.2808	1.0936	0.00062
km	100000	1000	1	39370.7	3280.8	1093.6	0.62137
in	2.54	0.0254	0.000025	1	0.08333	0.02777	0.000015
ft	30.48	0.3048	0.000304	12	1	0.3333	0.000189
yd	91.44	0.9144	0.000914	36	3	1	0.000568
mile	160930	1609.3	1.6093	63360	5280	1760	1
1 mm = 0.1 cm, 1 mm = 0.001 m							

Area

Unit	**cm^2**	**m^2**	**km^2**	**a**	**ft^2**	**yd^2**	**in^2**
cm^2	1	0.0001	-	0.000001	0.001076	0.000012	0.155000
m^2	10000	1	0.000001	0.01	10.764	1.1958	1550.000
km^2	-	1000000	1	10000	1076400	1195800	-
a	0.01	100	0.0001	1	1076.4	119.58	-
ft^2	-	0.092903	-	0.000929	1	0.1111	144.000
yd^2	-	0.83613	-	0.008361	9	1	1296.00
in^2	6.4516	0.000645	-	-	0.006943	0.000771	1
1 ha = 100 a, 1 $mile^2$ = 259 ha = 2.59 km^2							

Volume

Unit	**cm^3 = cc**	**m^3**	**Liter**	**in^3**	**ft^3**	**yd^3**
cm^3 = m liter	1	0.000001	0.001	0.061024	0.000035	0.000001
m^3	1000000	1	1000	61024	35.315	1.30796
Liter	1000	0.001	1	61.024	0.035315	0.001308
in^3	16.387	0.000016	0.01638	1	0.000578	0.000021
ft^3	28316.8	0.028317	28.317	1728	1	0.03704
yd^3	764529.8	0.76453	764.53	46656	27	1
1 gal(US) = 3785.41 cm^3 = 231 in^3 = 0.83267 gal(UK)						

Weight

Unit	**g**	**kg**	**t**	**oz**	**lb**
g	1	0.001	0.000001	0.03527	0.0022
kg	1000	1	0.001	35.273	2.20459
t	1000000	1000	1	35273	2204.59
oz	28.3495	0.02835	0.000028	1	0.0625
lb	453.592	0.45359	0.000454	16	1
1 tonne(metric) = 1.1023 ton(US) = 0.9842 ton(UK)					

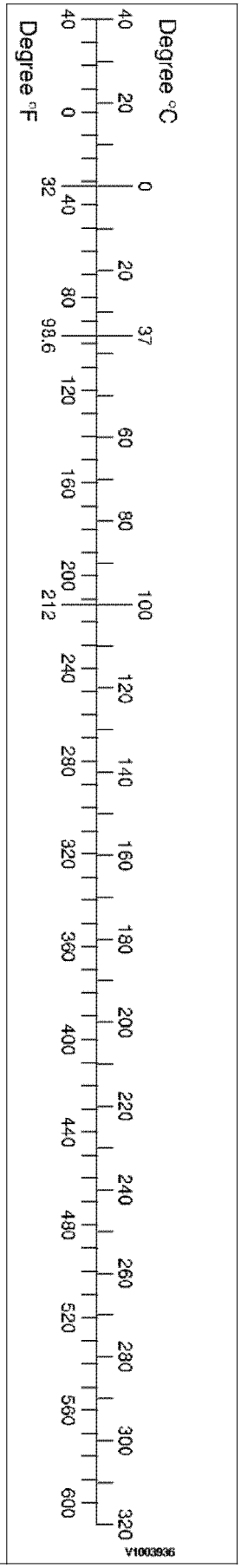
Pressure

Unit	**kgf/cm²**	**bar**	**Pa=N/m²**	**kPa**	**lbf/in²**	**lbf/ft²**
kgf/cm²	1	0.98067	98066.5	98.0665	14.2233	2048.16
bar	1.01972	1	100000	100	14.5037	2088.6
Pa=N/m²	0.00001	0.001	1	0.001	0.00015	0.02086
kPa	0.01020	0.01	1000	1	0.14504	20.886
lbf/in²	0.07032	0.0689	6894.76	6.89476	1	144
lbf/ft²	0.00047	0.00047	47.88028	0.04788	0.00694	1
1 kgf/cm² = 735.56 Torr(mmHg) = 0.96784 atm						

Approximate conversions

SI	Conversion	Non-SI	Conversion	SI
Unit	Factor	Unit	Factor	Unit
Torque				
newton meter (N·m)	x 10.2	= kgf·cm	x 0.8664	= (lbf·in)
newton meter (N·m)	x 0.74	= lb·ft	x 1.36	= N·m
newton meter (N·m)	x 0.102	= kgf·m	x 7.22	= (lbf·ft)
Pressure (Pa = N/m²)				
kilopascal (kPa)	x 4.0	= in. H_2O	x 0.249	= kPa
kilopascal (kPa)	x 0.30	= in. Hg	x 3.38	= kPa
kilopascal (kPa)	x 0.145	= psi	x 6.89	= kPa
(bar)	x 14.5	= psi	x 0.069	= (bar)
(kgf/cm²)	x 14.22	= psi	x 0.070	= (kgf/cm²)
(newton/mm²)	x 145.04	= psi	x 0.069	= (bar)
megapascal (MPa)	x 145	= psi	x 0.00689	= MPa
Power (W = J/s)				
kilowatt (kW)	x 1.36	= PS (cv)	x 0.736	= kW
kilowatt (kW)	x 1.34	= HP	x 0.746	= kW
kilowatt (kW)	x 0.948	= Btu/s	x 1.055	= kW
watt (W)	x 0.74	= ft·lb/s	x 1.36	= W

Note: ( ) non-si unit

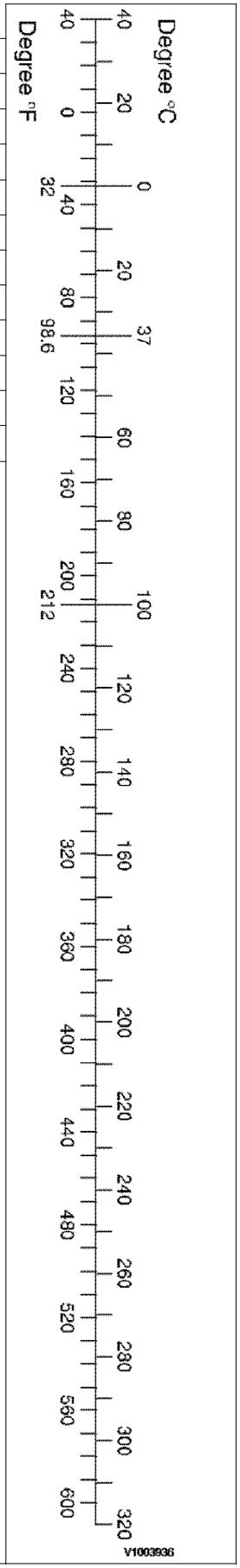


Approximate conversions

SI	Conversion	Non-SI	Conversion	SI
Unit	Factor	Unit	Factor	Unit

Energy (J = N·m)				
kilojoule (kJ)	x 0.948	= Btu	x 1.055	= kJ
joule (J)	x 0.239	= calorie	x 4.19	= J
Velocity and Acceleration				
meter per sec² (m/s²)	x 3.28	= ft/s²	x 0.305	= m/s²
meter per sec (m/s)	x 3.28	= ft/s	x 0.305	= m/s
kilometer per hour (km/h)	x 0.62	= mph	x 1.61	= km/h
Horse power/torque				
BHP x 5252 rpm = TQ (lb·ft)			TQ x rpm 5252 = B.H.P.	
Temperature				
°C = (°F - 32) /1.8	°F = (°C x 1.8) + 32			
Flow Rate				
liter/min (dm³/min)	x 0.264	= US gal/min x 3.785		= liter/min

Note: ( ) non-si unit



Document Title: **Engine, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Engine, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	15001	210000

Specifications

Item		**Unit**	**Specifications**
Model		–	D6E EIE3
Type		–	4–stroke, 6–cylinder, water cooled, vertical in-line, direct injection, turbocharged and air to air aftercooled diesel engine.
Rated output (Net)		HP (kW/PS) / rpm	137 (102/139) /2000
Maximum torque (Net)		kgf·m / rpm (N·m/rpm) (lbf·ft/ rpm)	70.4/1500 (690/1500) (511/1500)
Number of cylinder – Bore × Stroke		mm	6 – 98 × 126
Total displacement		cc (cu·in)	5700 (347.8)
Low idle		rpm	800 ± 30
High idle			2100 ± 30
Valve clearance	Intake	degree	To zero clearance, then 75° counter-clockwise
	Exhaust		To zero clearance, then 120° counter-clockwise
Clearance between control valve piston and rocker arm			To zero clearance, then 144° counter-clockwise
Minimum oil pressure, at idling and with warmed-up engine (120 °C oil temperature)		kgf / cm^2 (psi)	0.8 (12)
Type of cooling		–	Liquid–cooled with integrated oil cooler
Thermostat cracking / full opened temperature		°C (°F)	83 / 95 (181 / 203)
Compression ratio		–	18.4 : 1
Firing order		–	1 - 5 - 3 - 6 - 2 - 4
Turbocharger		–	Installed
Fan		–	Suction
Fan drive method			V-rib belt
Weight of engine (wet)		kg (lb)	530 (1168)

Document Title: **Engine, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Engine, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	10001	15000

Specifications

Item		**Unit**	**Specifications**
Make		–	DEUTZ
Model		–	D6D EOE2
Type		–	4–stroke, 6–cylinder, water cooled, vertical in-line, direct injection, turbocharged and air to air aftercooled diesel engine.
Rated output (Net)		HP (kW/PS) / rpm	132 (99/134) /2000
Maximum torque (Net)		kgf·m / rpm (N·m/rpm) (lbf·ft/ rpm)	60/1400 (588/1400) (434/1400)
Number of cylinder – Bore × Stroke		mm	6 – 98 × 126
Total displacement		cc (cu·in)	5700 (347.8)
Low idle		rpm	800 ± 30
High idle			2100 ± 30
Valve clearance	Intake	mm (inch)	0.3 (0.0118)
	Exhaust		0.5 (0.01969)
Minimum oil pressure, at idling and with warmed-up engine (120 °C oil temperature)		kgf / cm² (psi)	0.8 (12)
Type of cooling		–	Liquid–cooled with integrated oil cooler
Thermostat cracking / full opened temperature		°C (°F)	83 / 95 (181 / 203)
Compression ratio		–	18.4 : 1
Firing order		–	1 - 5 - 3 - 6 - 2 - 4
Turbocharger		–	Installed
Fan		–	Suction
Fan drive method			V-rib belt
Weight of engine (wet)		kg (lb)	550 (1213)

Document Title: **Valve clearance, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Valve system specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	15001	210000

Valves	
Valve head diameter:	
inlet	44.4 ±0.1 mm (1.75 ±0.004 in)
exhaust	38.7 ±0.1 mm (1.52 ±0.004 in)
Valve stem, diameter:	
inlet	7.94 – 0.04 mm (0.31 –0.0015 in)
exhaust	7.94 – 0.04 mm (0.31 –0.0015 in)
Valve clearance, cold engine, value when adjusting:	
inlet	To zero clearance, then 75° counter-clockwise
exhaust	To zero clearance, then 120° counter-clockwise
Clearance between control valve piston and rocker arm	To zero clearance, then 144° counter-clockwise
Measurement between valve disc and cylinder head's face:	
inlet	0.9 +0.15 –0.1 mm (0.035 +0.006 –0.0039 in)
exhaust	0.9 +0.15 –0.1 mm (0.035 +0.006 –0.0039 in))
Valve head edge, thickness:	
inlet	2.36 mm (0.09 in)
exhaust	1.8 mm (0.07 in)

Valve guides	
Max. clearance valve stem - guide, wear tolerance:	
Inlet	0.07 — 0.13 mm (0.0027 — 0.0052 in)
Outlet	0.07 — 0.13 mm (0.0027 — 0.0052 in)

Valve springs	
Inlet/exhaust	
Length, unloaded	59 ±1.9 mm (2.32 ±0,039 in)
Diameter, thread	4 ±0.03 mm (0.157 ±0,012 in)

Rocker arm	
Hole diameter inlet, exhaust	21.02 +0.033 (0.828 +0.0013 in)
Tapp	21 –0.021 (0.827 –0.0008 in)

Valve seat	
Valve seat diameter:	

Inlet	46.09 –0.02 mm
Outlet	39.99 –002 mm
Valve seat angle:	
Inlet	30°
Outlet	45°

Document Title: **Lubrication system, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Lubrication system, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	15001	210000

Oil temperature, normal	80 °C (176 °F)
Oil temperature, max.	125 °C (257 °F)
Oil pressure, > 1100 rpm	0.45 MPa (4.5 bar, 65 psi)
Oil pressure, low idle	0.08 MPa (0.8 bar, 11.6 psi)
Pressure regulating valve, opening pressure	0.4 ±0.04 MPa (4 ±0.4 bar, 58 ±5.8 psi)
Overflow valve, opening pressure	0.25 ±0.05 MPa (2.5 ±0.5 bar, 36.2 ±7.3 psi)

Document Title: **Fuel pressure, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Fuel system, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo			

Specifications

Item		**Unit**	**Specifications**
Fuel injection pump		–	Bosch
Fuel consumption		g/kW·h	224 at 2000 rpm
Fuel tank	Capacity	Liter	260
		gal	68.7
	Filter	–	# 60
Fuel filling pump	Rated voltage	DC (V)	24
	Rated current	A	7 (at 3m head)
	Output flow	lpm/gpm	35 / 9.2 (at 3m head)
	Continuous working time in ambient temperature	minutes	30 at 20 °C, 25 at 30 °C, 20 at 40 °C
	Working temperature	°C (°F)	–30 ~ 40 (–22 ~ 104)

Document Title: **Fuel pressure, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Fuel pressure, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	15001	210000

Fuel feed pressure	
Minimum pressure in engine starting condition	0.35 ±0.05 MPa, 51 ±7 psi, 3.5 ±0.5 bar
Minimum pressure in engine running condition	0.6 ±0.05 MPa, 87 ±7 psi, 6.0 ±0.5 bar
Maximum pressure in the pump pressure relive valve	1.15 ±0.15 MPa, 167 ±22 psi, 11.5 ±1.5 bar

Fuel control unit (FCU) pressure	
Pressure in engine starting condition	0.07 ±0.04 MPa, 10 ±6 psi, 0.7±0.4 bar
Pressure without load in engine running condition	0.1 ±0.01 MPa, 15 ±2 psi, 1 ±0.1 bar
Pressure with load in engine running condition	0.09–0.21 MPa, 13–31 psi, 0.9–2.1 bar
Pressure without regulation in engine running condition	0.45 ±0.02 MPa, 65 ±3 psi, 4.5 ±0.2 bar

High pressure fuel pump output pressure at testing condition	
Output pressure	55 ±5 MPa, 7979 ±725 psi, 550 ±50 bar

Fuel rail pressure	
Pressure in engine starting condition	30 ±5 MPa, 4352 ±725 psi, 300 ±50 bar (at charge air pressure 0 MPa, 0 psi, 0 bar)
Pressure with rail PRV open in running conditions	70 ±5 MPa, 10153 ±725 psi, 700 ±50 bar
Pressure with **load above 60%** in engine running condition	80–150 MPa, 11606–21762 psi, 800–1500 bar (at charge air pressure 0.05–0.25 MPa, 7.3–36.3 psi, 0.5–2.5 bar)

Document Title: **Charged air cooler, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Charged air cooler, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	10001	15000

Specifications

Item	**Unit**	**Specifications**
Core type	–	1-Row C.F (Wave fin)
Core material	–	Aluminium
Tube type	–	Bar and plate type
Core size (W × H × D)	mm	210 × 770 × 94
	inch	8.3 × 30.3 × 3.7
Weight (dry)	kg (lb)	16 (35)

Document Title: **Charged air cooler, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Charged air cooler, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	15001	210000

Specifications

Item	**Unit**	**Specifications**
Core type	–	1-Row C.F (Wave fin)
Core material	–	Aluminium
Tube type	–	Bar and plate type
Core size (W × H × D)	mm	184 × 750 × 140
	inch	7.2 × 29.5 × 5.5
Weight (dry)	kg (lb)	–

Document Title: **Cooling system, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Cooling system, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	10001	15000

Specifications

Item		**Unit**	**Specifications**
Radiator	Core type	–	1–Row CF (Wave fin)
	Core size (W × H × D)	mm	496 × 770 × 94
		in	19.5 × 30.3 × 3.7
	Dry weight	kg (lb)	39 (86)
Hydraulic oil cooler	Core type	–	1–Row CF (Wave fin)
	Core size (W × H × D)	mm	653 × 570 × 63
		inch	25.7 × 22.4 × 2.48
	Dry weight	kg (lb)	26 (57)

Document Title: **Cooling system, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Cooling system, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	15001	210000

Specifications

Item		**Unit**	**Specifications**
Radiator	Core type	–	1–Row CF (Wave fin)
	Core size (W × H × D)	mm	368 × 750 × 140
		in	14.5 × 29.5 × 5.5
	Dry weight	kg (lb)	–
Hydraulic oil cooler	Core type	–	1–Row CF (Wave fin)
	Core size (W × H × D)	mm	324 × 750 ×140
		inch	12.8 × 29.5 × 5.5
	Dry weight	kg (lb)	–

Document Title: **Electrical system, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Electrical system, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo			

Electrical system	
System voltage	DC 24 V

Document Title: **Instrument control unit I-ECU, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Instrument control unit I-ECU, specifications

Showing Selected Profile

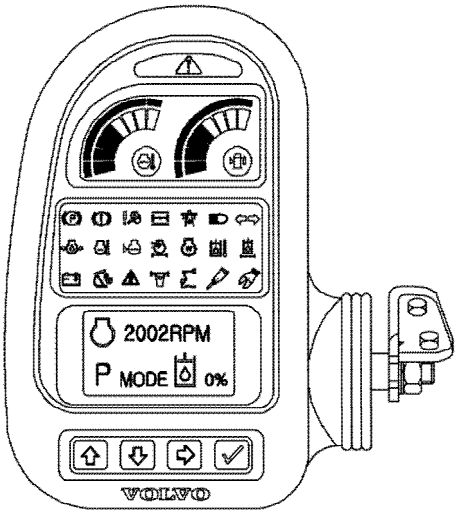
Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo			

Instrument control unit, I-ECU connector, specifications

Connector	Counterpart connector
Housing: AMP 174657-2 Terminal: AMP 171661-1 Wire seal: AMP 172888-2	Housing: AMP 174655-2 Terminal: AMP 171662-1 Wire seal: AMP 172888-2

Connector pin, specifications

No	Description	No	Description
1	CAN_H (J1939_H)	6	Battery power 24 V
2	CAN_L (J1939_ L) (BL)	7	Working light
3	J1587_ A (Y/R)	8	Auto/manual switch input
4	J1587_ B (Y/SB)	9	Turn signal (LH/RH)
5	Power for clock 24 V (R)	10	Battery ground



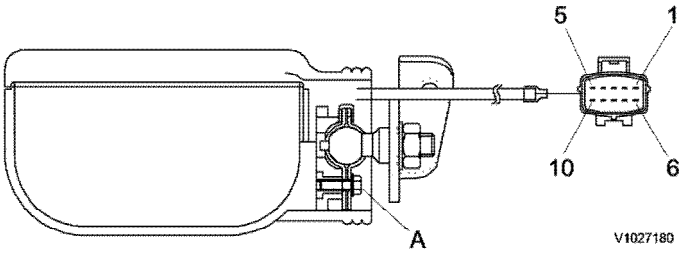


Figure 1
I-ECU, connector

Tightening torque (A) : 0,5 Kgf m (0,4 lbf ft)

VOLVO

Service Information

Document Title: **Engine control unit E-ECU, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Engine control unit E-ECU, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	10001	15000

Engine control unit, E-ECU connector, specifications

Connector	**Specifications**
Engine connector	AMP 346244-1
Cab connector	AMP 346245-5

E-ECU pin, specifications

No	**Description**	**No**	**Description**
A2	Boost air temperature sensor (+)	B1	CAN H (J1939)
A3	Boost air temperature sensor (+)	B2	CAN L (J1939)
A4	Engine oil pressure sensor voltage supply	B3	Ambient temperature sensor (+)
A5	Sensors ground	B4	Limp home position
A7	Engine speed sensor, camshaft (+)	B5	Air heater
A11	Injector 1 solenoid valve (+)	B7	Coolant level sensor (+)
A12	Injectors 1 - 3 solenoid valve ground	B8	Air inlet pressure switch (-) and coolant lever sensor (-)
A13	Fuel temperature sensor (+)	B9	Ground
A14	Engine oil pressure sensor (+)	B10	Ground
A18	Engine speed sensor, camshaft (-)	B11	Power supply
A22	Injector 2 solenoid valve (+)	B12	Power supply
A23	Injector 3 solenoid valve (+)	B13	Ambient temperature sensor, ground
A24	Injectors 4 - 6 solenoid valve ground	B17	Air inlet pressure switch (+)
A25	Engine coolant temperature sensor (+)	B25	J1587 A
A30	Engine speed sensor, flywheel (-)	B26	J1587 B
A31	Engine speed sensor, flywheel (+)	B31	Air heater relay
A34	Injector 4 solenoid valve (+)		
A35	Injector 5 solenoid valve (+)		
A36	Injector 6 solenoid valve (+)		

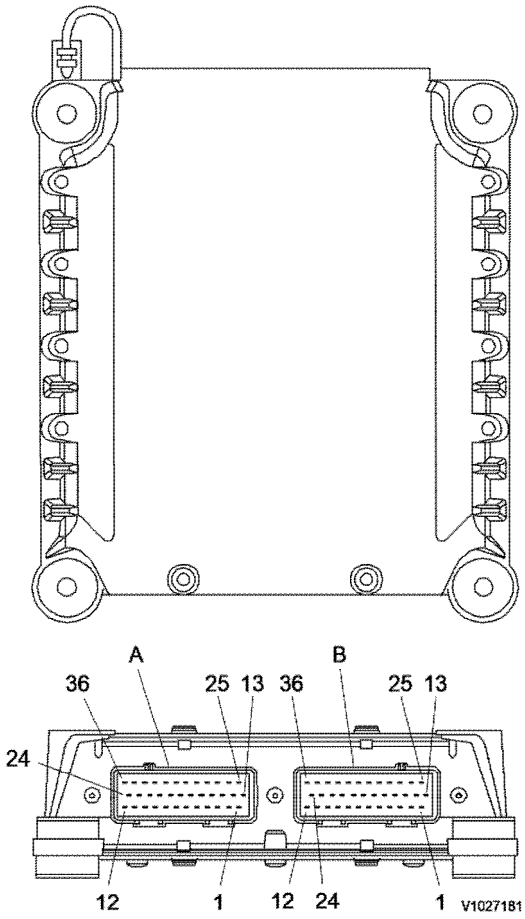


Figure 1
E-ECU, connectors

A. Engine connector to mate with wire harness connector AMP 346244/1
B. Cab connector to mate with wire harness connector AMP 346245/5

Document Title: **Engine control unit E-ECU, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Engine control unit E-ECU, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	15001	210000

E-ECU pin, specifications

Pin No.	Description	Pin No.	Description
A7	Feed to sensor (5 V)	B3	Engine oil level, low
A11	Signal ground to sensor	B4	Engine oil level, high
A12	Actuator MPROP common rail	B7	Preheating diagnostics coil
A15	Ambient filter ground	B8	Water in fuel, signal
A16	Actuator MPROP common rail ground	B10	Switch ground
A19	Rail pressure sensor	B11	Engine oil pressure, signal
A22	Boost pressure signal	B15	Emergency switch (IVS)
A29	Air cleaner indicator	B16	Fuel pressure, signal
A31	Oil temperature signal	B17	Feed to sensor
A33	SAE J1587 B information bus	B18	Signal ground to sensor
A34	SAE J1587 A information bus	B23	Coolant level, signal
A36	Injector cylinder 6	B25	Preheating relay (coil)
A37	Engine crank speed, plus (+)	B27	Coolant temperature, engine, signal
A38	Engine crank speed, minus (-)	B29	Start lock
A40	Injector cylinder 5	B30	Solenoid valve for on / off
A44	Injector cylinder 4	B31	Ambient air temperature sensor
A45	Engine camshaft speed, plus (+)	B51	SAE J1937 H control bus
A47	Boost temperature, signal	B55	SAE J1937 L control bus
A48	Injector cylinder 3	B57	Voltage feed (ECU supply)
A52	Injector cylinder 2	B58	ECU ground
A56	Injector cylinder 1	B59	ECU ground
A57	ECU ground	B60	Voltage feed (ECU supply)
A59	Injector cylinder 1 ~ 3 (sv) — ground	B61	ECU ground
A60	Injector cylinder 4 ~ 6 (sv) — ground		

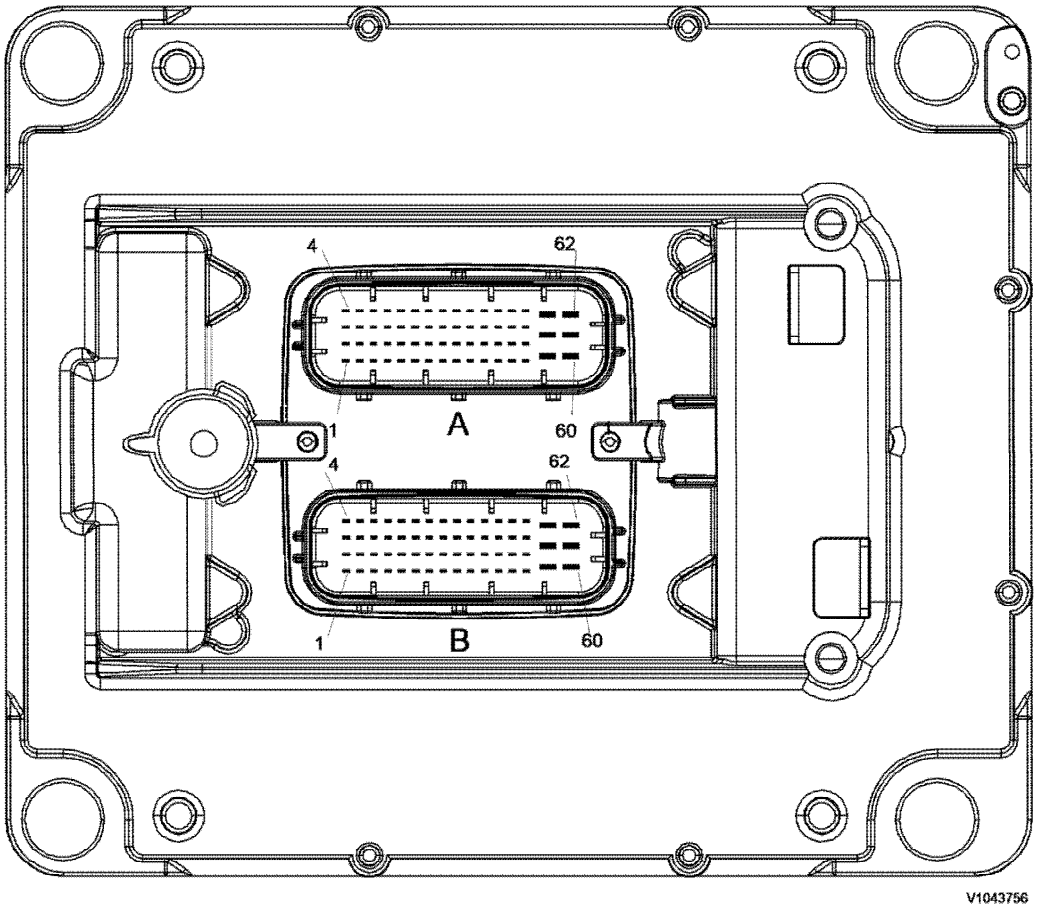


Figure 1
E-ECU, connectors

A	62 pin Tyco Connector, A
B	62 pin Tyco Connector, B

Document Title: **Battery, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Battery, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	10001	15000

Battery, specifications

Items	**Specifications**
Quantity	2 in series
Battery voltage (nominal)	Min. 12,65 V / battery Max. 12,95 V / battery
Capacity	150 Ah / battery
Battery disconnector	Connected to minus (-)
Acid density at 27 °C (81 °F)	Min. 1,265 g/ccm Max. 1,300 g/ccm

Document Title: **Battery, specifications**	Function Group: **030**	Information Type: **Service Information**	Date: **3/24/2026**
Profile: **EW145B Volvo**			

Go back to Index Page

Battery, specifications

Showing Selected Profile

Valid for serial numbers			
Model	**Production site**	**Serial number start**	**Serial number stop**
EW145B Volvo	Changwon	15001	210000

Battery, specifications

Items	**Specifications**
Quantity	2 in series
Battery voltage (nominal)	Min. 12,65 V / battery Max. 12,95 V / battery
Capacity	120 Ah / battery
Battery disconnector	Connected to minus (-)