

Document Title: General dimensions	Function Group: 030	Information Type: Service Information	Date: 3/25/2026
Profile:			

General dimensions

Mono Boom

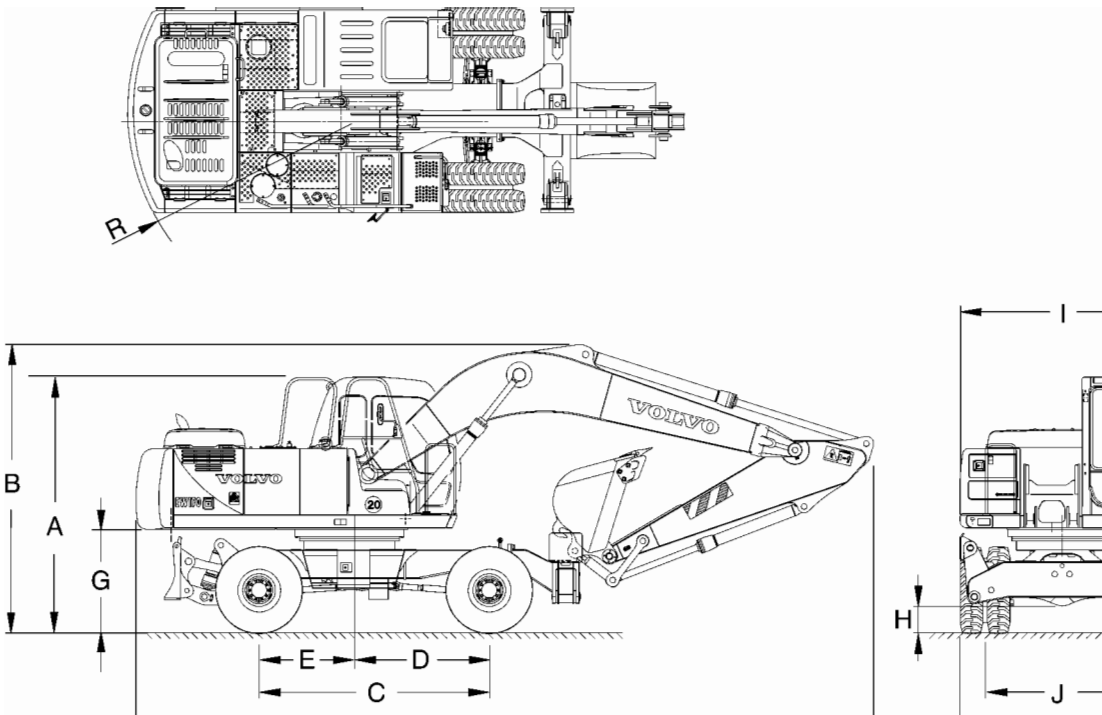


Figure 1

Dimensions of machine (Mono boom)

Dimensions (Mono boom), whole machine

Item	Symbol	Unit	Standard	Option
Front digging unit	Boom length	-	m (ft)	5.2 (17' 1")
	Arm length	-	m (ft)	2.6 (8' 6")
Overall height	Cab	A	mm (ft)	3100 (10' 2")
	Boom	B	mm (ft)	3840 (12' 7")
Wheelbase	C	mm (ft)	2800 (9' 2")	
From slew center to front axle center	D	mm (ft)	1700 (5' 7")	
From slew center to rear axle center	E	mm (ft)	1100 (3' 7")	
Overall length	F	mm (ft)	8920 (29' 3")	8950 (29' 4")
Ground clearance	Upper frame	G	mm (ft)	1250 (4' 1")
	Axle	H	mm (ft)	320 (1' 1")
Superstructure	Overall width	I	mm (ft)	2460 (8' 1")
	Turning radius	R	mm (ft)	2600 (8' 6")
Tread	J	mm (ft)	1874 (6' 2")	
Overall tire width	K	mm (ft)	2495 (8' 2")	

Sample manual. Download All 3198 pages at:

<https://www.arepairmanual.com/downloads/ew180-volvo-excavator-service-manual/>

2 Piece boom

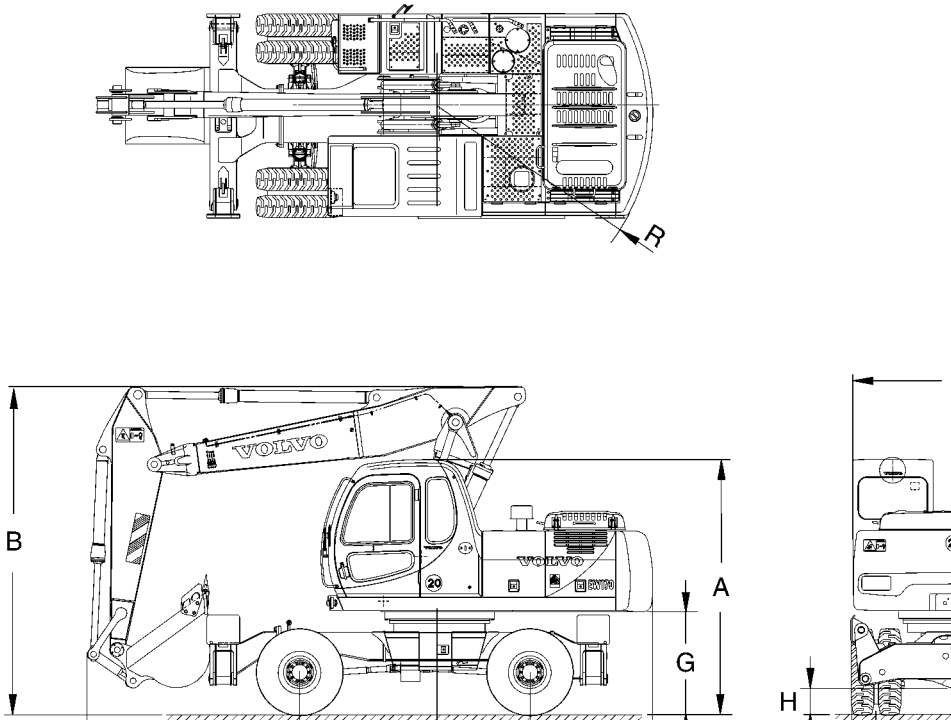


Figure 2
Dimensions of machine (2 Piece boom)

Dimensions (2 Piece boom), whole machine

Item		Symbol	Unit	Standard	Option
Front digging unit	Boom length	-	m (ft)	4.97 (16' 4")	5200 (17' 1")
	Arm length	-	m (ft)	2.3 (7' 7")	2.6 (8' 6")
Overall height	Cab	A	mm (ft)	3100 (10' 2")	
	Boom	B	mm (ft)	3995 (13' 1")	4100 (13' 5")
Wheelbase		C	mm (ft)	2800 (9' 2")	
From slew center to front axle center		D	mm (ft)	1700 (5' 7")	
From slew center to rear axle center		E	mm (ft)	1100 (3' 7")	
Overall length		F	mm (ft)	6900 (22' 8")	
Ground clearance	Upper frame	G	mm (ft)	1250 (4' 1")	
	Axle	H	mm (ft)	320 (1' 1")	
Superstructure	Overall width	I	mm (ft)	2460 (8' 1")	
	Turning radius	R	mm (ft)	2600 (8' 6")	
Tread		J	mm (ft)	1874 (6' 2")	
Overall tire width		K	mm (ft)	2495 (8' 2")	

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General dimensions

Mono Boom

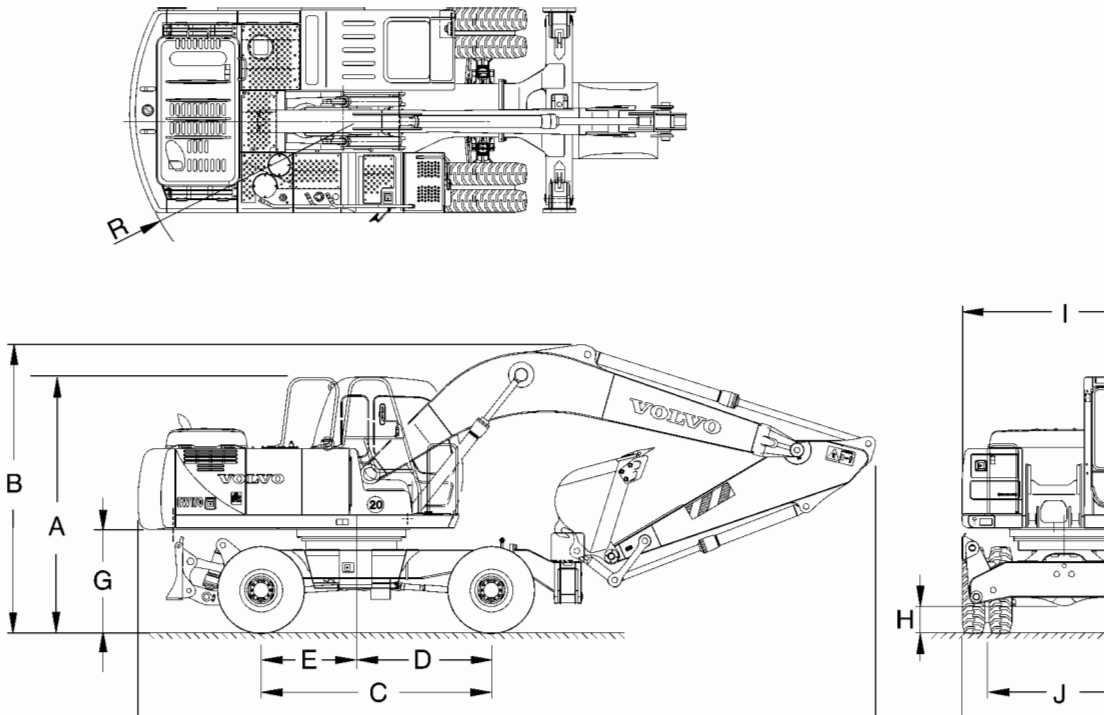


Figure 1

Dimensions of machine (Mono boom)

Dimensions (Mono boom), whole machine

Item		Symbol	Unit	Standard	Option
Front digging unit	Boom length	-	m (ft)	5.2 (17' 1")	
	Arm length	-	m (ft)	2.6 (8' 6")	3.1 (10' 2")
Overall height	Cab	A	mm (ft)	3100 (10' 2")	
	Boom	B	mm (ft)	3840 (12' 7")	3750 (12' 4")
Wheelbase		C	mm (ft)	2800 (9' 2")	
From slew center to front axle center		D	mm (ft)	1700 (5' 7")	
From slew center to rear axle center		E	mm (ft)	1100 (3' 7")	
Overall length		F	mm (ft)	8920 (29' 3")	8950 (29' 4")
Ground clearance	Upper frame	G	mm (ft)	1250 (4' 1")	
	Axle	H	mm (ft)	320 (1' 1")	
Superstructure	Overall width	I	mm (ft)	2460 (8' 1")	
	Turning radius	R	mm (ft)	2600 (8' 6")	
Tread		J	mm (ft)	1874 (6' 2")	
Overall tire width		K	mm (ft)	2495 (8' 2")	

2 Piece boom

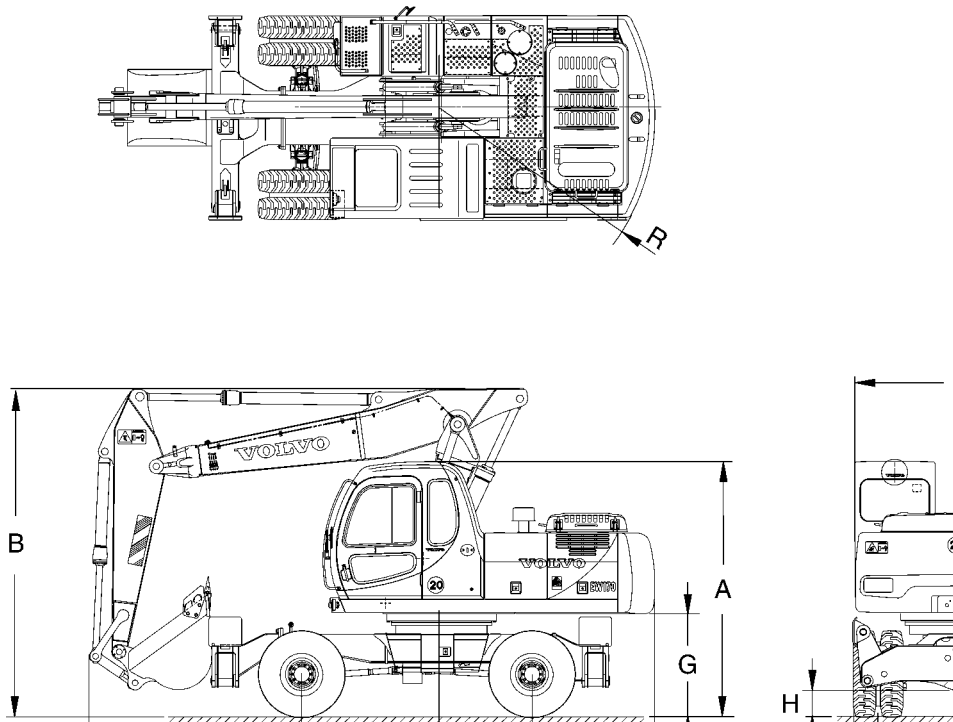


Figure 2
Dimensions of machine (2 Piece boom)

Dimensions (2 Piece boom), whole machine

Item		Symbol	Unit	Standard	Option
Front digging unit	Boom length	-	m (ft)	4.97 (16' 4")	5200 (17' 1")
	Arm length	-	m (ft)	2.3 (7' 7")	2.6 (8' 6")
Overall height	Cab	A	mm (ft)	3100 (10' 2")	
	Boom	B	mm (ft)	3995 (13' 1")	4100 (13' 5")
Wheelbase		C	mm (ft)	2800 (9' 2")	
From slew center to front axle center		D	mm (ft)	1700 (5' 7")	
From slew center to rear axle center		E	mm (ft)	1100 (3' 7")	
Overall length		F	mm (ft)	6900 (22' 8")	
Ground clearance	Upper frame	G	mm (ft)	1250 (4' 1")	
	Axle	H	mm (ft)	320 (1' 1")	
Superstructure	Overall width	I	mm (ft)	2460 (8' 1")	
	Turning radius	R	mm (ft)	2600 (8' 6")	
Tread		J	mm (ft)	1874 (6' 2")	
Overall tire width		K	mm (ft)	2495 (8' 2")	

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General dimensions

Mono Boom

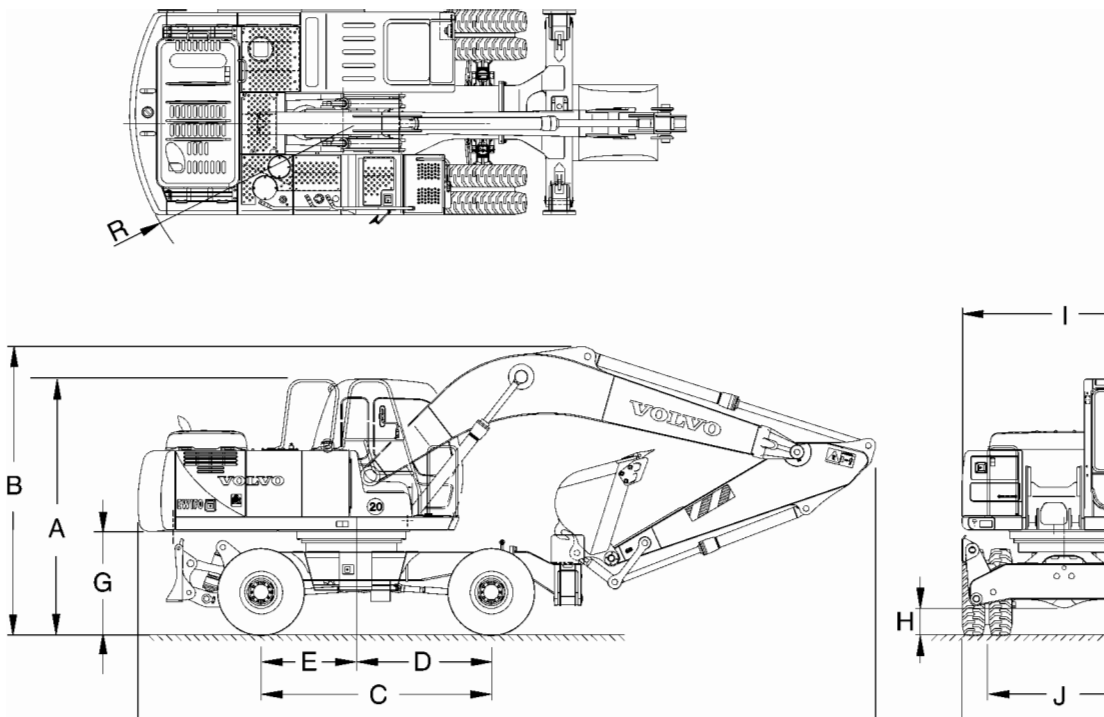


Figure 1

Dimensions of machine (Mono boom)

Dimensions (Mono boom), whole machine

Item	Symbol	Unit	Standard	Option
Front digging unit	Boom length	-	m (ft)	5.2 (17' 1")
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Overall height	Cab	A	mm (ft)	3100 (10' 2")
	Boom	B	mm (ft)	3840 (12' 7")
Wheelbase	C	mm (ft)	2800 (9' 2")	
From slew center to front axle center	D	mm (ft)	1700 (5' 7")	
From slew center to rear axle center	E	mm (ft)	1100 (3' 7")	
Overall length	F	mm (ft)	8920 (29' 3")	8950 (29' 4")
Ground clearance	Upper frame	G	mm (ft)	1250 (4' 1")
	Axle	H	mm (ft)	320 (1' 1")
Superstructure	Overall width	I	mm (ft)	2460 (8' 1")
	Turning radius	R	mm (ft)	2600 (8' 6")
Tread	J	mm (ft)	1874 (6' 2")	
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2 Piece boom

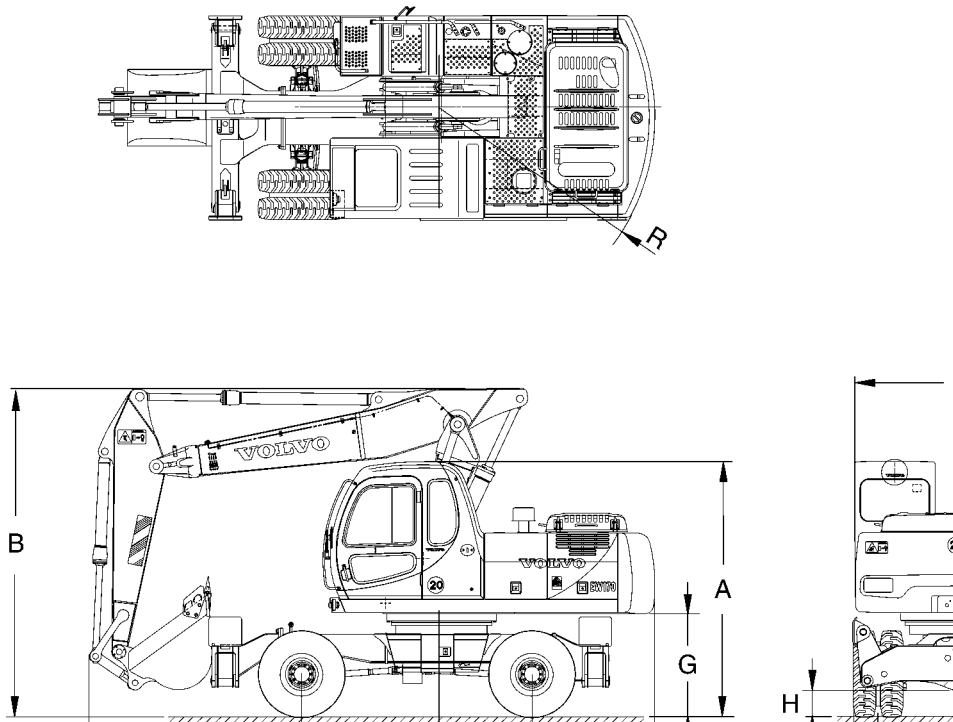


Figure 2
Dimensions of machine (2 Piece boom)

Dimensions (2 Piece boom), whole machine

Item		Symbol	Unit	Standard	Option
Front digging unit	Boom length	-	m (ft)	4.97 (16' 4")	5200 (17' 1")
	Arm length	-	m (ft)	2.3 (7' 7")	2.6 (8' 6")
Overall height	Cab	A	mm (ft)	3100 (10' 2")	
	Boom	B	mm (ft)	3995 (13' 1")	4100 (13' 5")
Wheelbase		C	mm (ft)	2800 (9' 2")	
From slew center to front axle center		D	mm (ft)	1700 (5' 7")	
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Overall length		F	mm (ft)	6900 (22' 8")	
Ground clearance	Upper frame	G	mm (ft)	1250 (4' 1")	
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	Turning radius	R	mm (ft)	2600 (8' 6")	
Tread		J	mm (ft)	1874 (6' 2")	
Overall tire width		K	mm (ft)	2495 (8' 2")	

Document Title: Location of components	Function Group: 030	Information Type: Service Information	Date: 3/25/2026
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Location of components

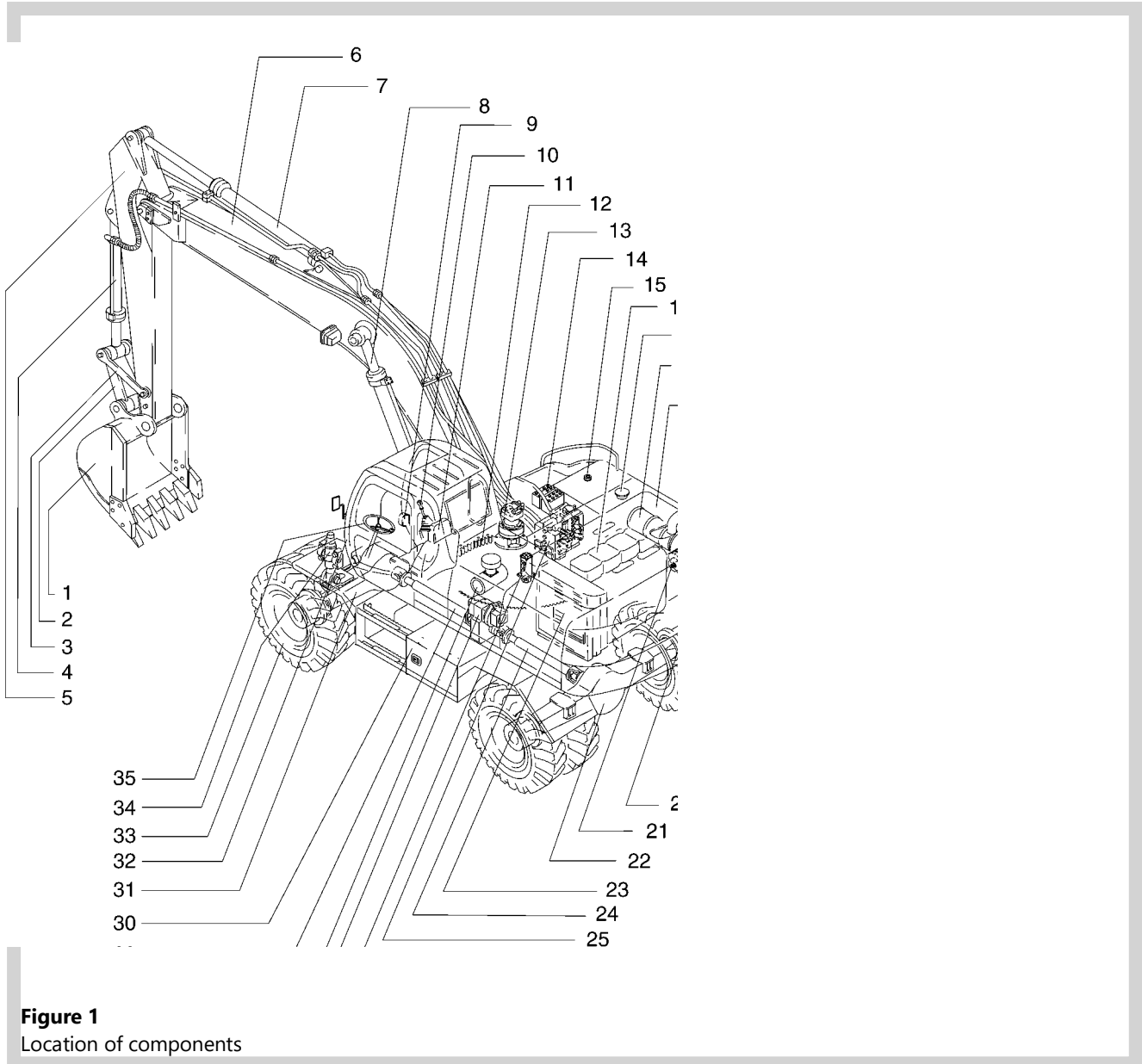


Figure 1
Location of components

1	Bucket	13	Slew motor and gearbox	25	Main control valve
2	Link	14	Battery	26	Center passage
3	Connecting rod	15	Fuel tank	27	Transfer gearbox and travel motor
4	Bucket cylinder	16	Engine	28	Air cleaner
5	Arm	17	Hydraulic tank	29	Front drive shaft
6	Boom	18	Muffler	30	Tool box
7	Arm cylinder	19	Cowl	31	Front axle
8	Boom cylinder	20	Counterweight	32	Cab
9	I-ECU	21	Hydraulic pump	33	Tire

10	Remote control valve (lever)	22	Rear axle	34	Axle locking cylinder
11	Operator seat	23	Radiator and oil cooler	35	Steering wheel
12	Slew gear	24	Rear drive shaft		

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Location of components

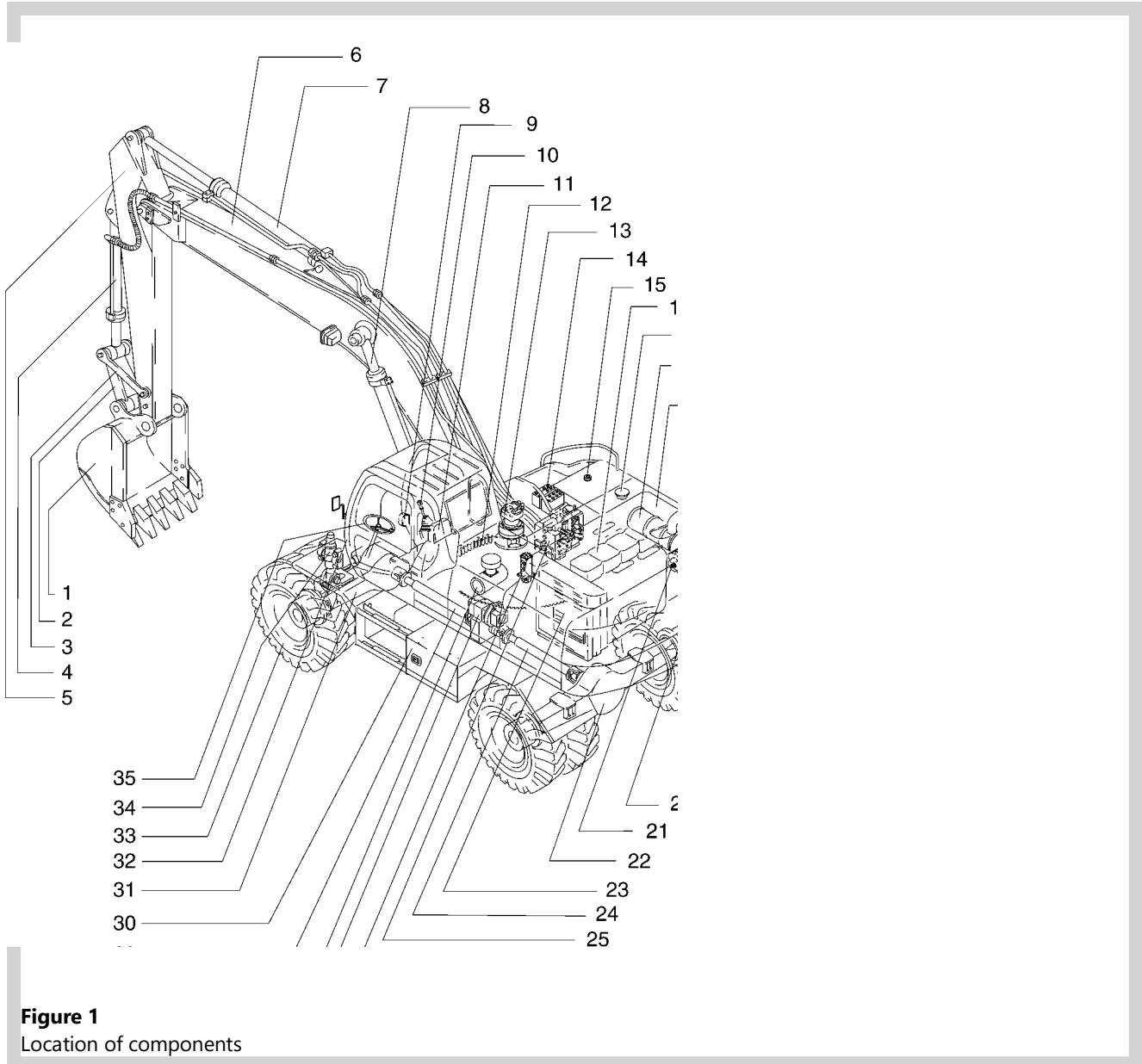


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5	Arm	17	Hydraulic tank	29	Front drive shaft
6	Boom	18	Muffler	30	Tool box
7	Arm cylinder	19	Cowl	31	Front axle
8	Boom cylinder	20	Counterweight	32	Cab
9	I-ECU	21	Hydraulic pump	33	Tire

10	Remote control valve (lever)	22	Rear axle	34	Axle locking cylinder
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12	Slew gear	24	Rear drive shaft		

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Location of components

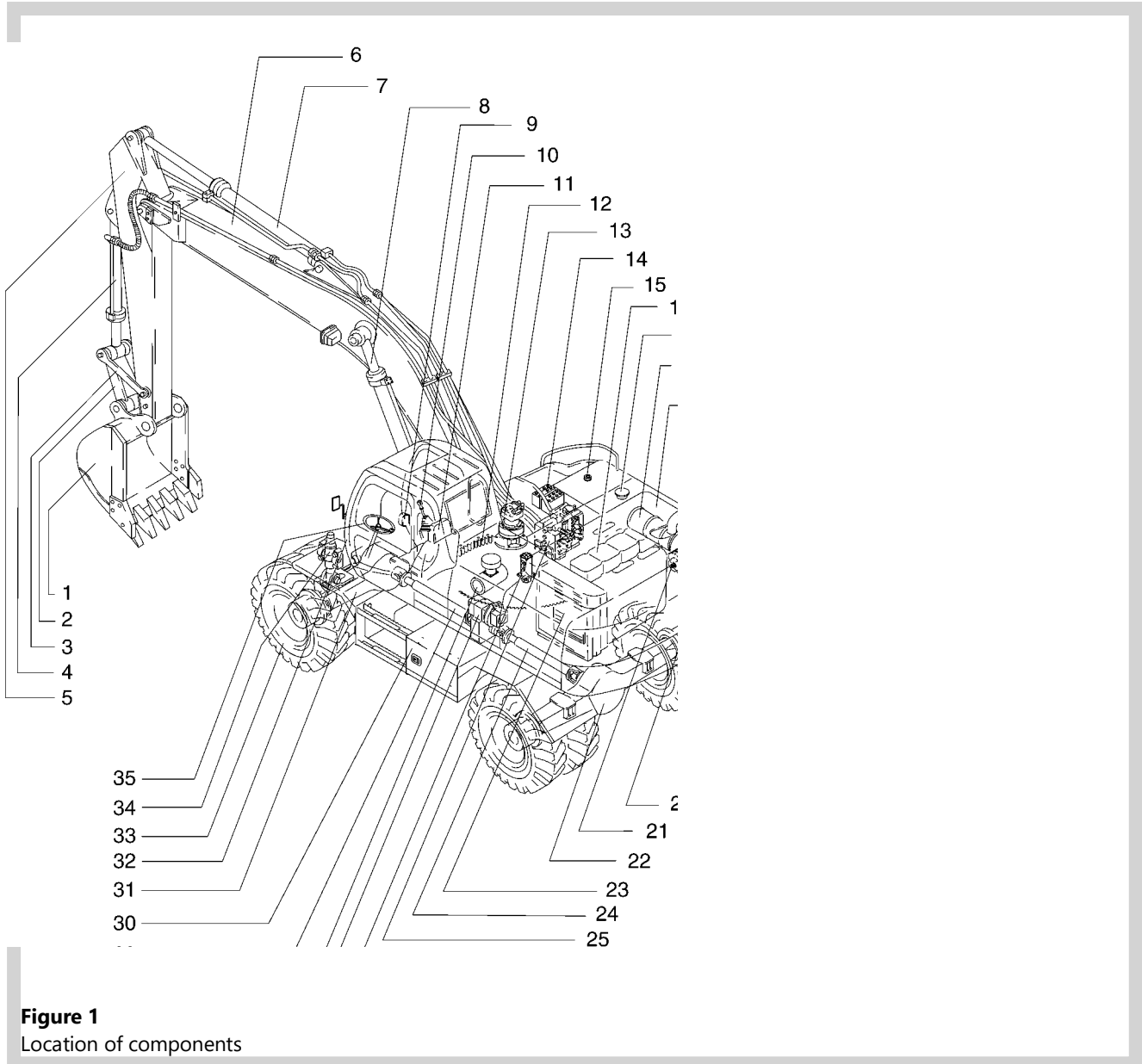


Figure 1
Location of components

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6	Boom	18	Muffler	30	Tool box
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12	Slew gear	24	Rear drive shaft		

Document Title: Measurement conversion tables	Function Group: 030	Information Type: Service Information	Date: 3/25/2026
Profile:			

Measurement conversion tables

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 mile² = 259 ha = 2.59 km²

Volume

Unit	cm ³ = cc	m ³	l	in ³	ft ³	yd ³
cm ³ = m l	1	0.000001	0.001	0.061024	0.000035	0.000001
m ³	1000000	1	1000	61024	35.315	1.30796
l	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 cm³ = 231 in³ = 0.83267 gal (US)

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

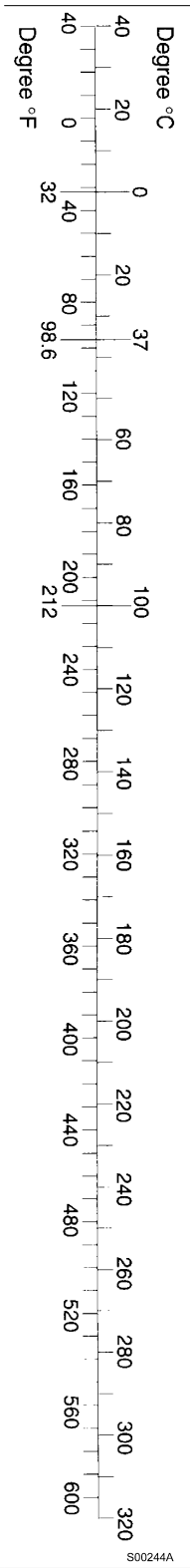
oz	28.3495	0.02835	0.000028	1	0.0625
lb	453.592	0.45359	0.000454	16	1
1 tonne (metric) = 1.1023 ton (US) = 0.9842 ton (UK)					

Pressure

Unit	kgf/cm ²	bar	Pa=N/m ²	kPa	lbf / in ²	lbf / ft ²
kgf / cm ²	1	0.98067	98066.5	98.0665	14.2233	2048.16
bar	1.01972	1	100000	100	14.5037	2088.6
Pa=N / m ²	0.00001	0.001	1	0.001	0.00015	0.02086
kPa	0.01020	0.01	1000	1	0.14504	20.886
lbf / in ²	0.07032	0.0689	6894.76	6.89476	1	144
lbf / ft ²	0.00047	0.00047	47.88028	0.04788	0.00694	1
kgf / cm ² = 735.56 Torr (mmHg) = 0.96784 atm						

Approximately conversions

SI Unit	Conversion Factor	Non-SI Unit	Conversion Factor	SI Unit
Torque				
newton meter (N·m)	x 10.2	= kgf·cm	x 0.8664	= (lb·in)
newton meter (N·m)	x 0.74	= lbf·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 ₂ O	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 / cm ²)	x 14.22	= psi	x 0.070	= (kg / cm ²)
(newton / mm ²)	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
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 sec ² (m / s ²)	x 3.28	= ft / s ²	x 0.305	= m / s ²
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 R.P.M. = TQ (lbf·ft)			TQ x R.P.M. 5252 = B.H.P.	
Temperature				
°C = (°F - 32) / 1.8		°F = (°C x 1.8) + 32		
Flow Rate				
liter / min (dm ³ / min)	x 0.264	= US gal / min x 3.785	= liter / min	



S00244A

Note : () Non-Si Unit

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Measurement conversion tables

Length

Unit	cm	m	km	in	ft	yd	mile
cm	1	0.01	0.00001	0.3937	0.03281	0.01094	0.000006
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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 mile² = 259 ha = 2.59 km²

Volume

Unit	cm ³ = cc	m ³	l	in ³	ft ³	yd ³
cm ³ = m l	1	0.000001	0.001	0.061024	0.000035	0.000001
m ³	1000000	1	1000	61024	35.315	1.30796
l	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

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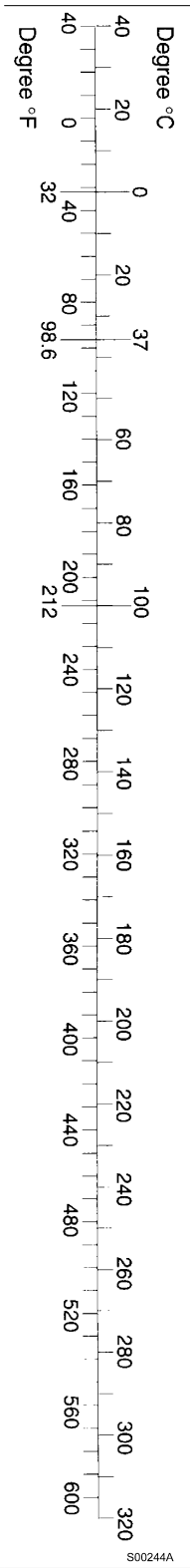
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bar	1.01972	1	100000	100	14.5037	2088.6
Pa=N / m ²	0.00001	0.001	1	0.001	0.00015	0.02086
kPa	0.01020	0.01	1000	1	0.14504	20.886
lbf / in ²	0.07032	0.0689	6894.76	6.89476	1	144
lbf / ft ²	0.00047	0.00047	47.88028	0.04788	0.00694	1
kgf / cm ² = 735.56 Torr (mmHg) = 0.96784 atm						

Approximately conversions

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newton meter (N·m)	x 0.74	= lbf·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 ₂ O	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 / cm ²)	x 14.22	= psi	x 0.070	= (kg / cm ²)
(newton / mm ²)	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
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 sec ² (m / s ²)	x 3.28	= ft / s ²	x 0.305	= m / s ²
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 R.P.M. = TQ (lbf·ft)			TQ x R.P.M. 5252 = B.H.P.	
Temperature				
°C = (°F - 32) / 1.8		°F = (°C x 1.8) + 32		
Flow Rate				
liter / min (dm ³ / min)	x 0.264	= US gal / min x 3.785	= liter / min	



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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 mile² = 259 ha = 2.59 km²

Volume

Unit	cm ³ = cc	m ³	l	in ³	ft ³	yd ³
cm ³ = m l	1	0.000001	0.001	0.061024	0.000035	0.000001
m ³	1000000	1	1000	61024	35.315	1.30796
l	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 cm³ = 231 in³ = 0.83267 gal (US)

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

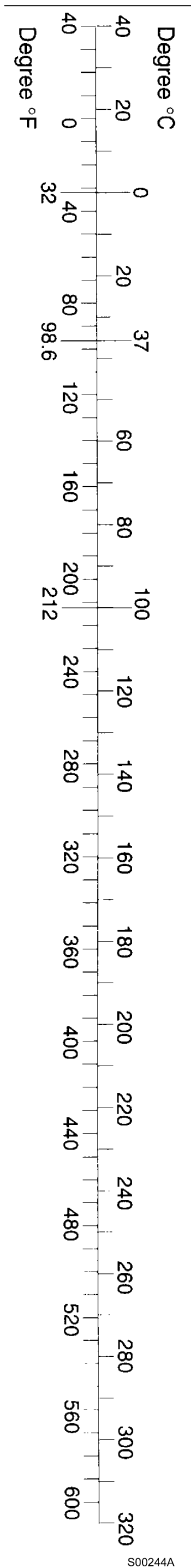
oz	28.3495	0.02835	0.000028	1	0.0625
lb	453.592	0.45359	0.000454	16	1
1 tonne (metric) = 1.1023 ton (US) = 0.9842 ton (UK)					

Pressure

Unit	kgf/cm ²	bar	Pa=N/m ²	kPa	lbf / in ²	lbf / ft ²
kgf / cm ²	1	0.98067	98066.5	98.0665	14.2233	2048.16
bar	1.01972	1	100000	100	14.5037	2088.6
Pa=N / m ²	0.00001	0.001	1	0.001	0.00015	0.02086
kPa	0.01020	0.01	1000	1	0.14504	20.886
lbf / in ²	0.07032	0.0689	6894.76	6.89476	1	144
lbf / ft ²	0.00047	0.00047	47.88028	0.04788	0.00694	1
kgf / cm ² = 735.56 Torr (mmHg) = 0.96784 atm						

Approximately conversions

SI Unit	Conversion Factor	Non-SI Unit	Conversion Factor	SI Unit
Torque				
newton meter (N·m)	x 10.2	= kgf·cm	x 0.8664	= (lb·in)
newton meter (N·m)	x 0.74	= lbf·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 ₂ O	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 / cm ²)	x 14.22	= psi	x 0.070	= (kg / cm ²)
(newton / mm ²)	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
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 sec ² (m / s ²)	x 3.28	= ft / s ²	x 0.305	= m / s ²
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 R.P.M. = TQ (lbf·ft)			TQ x R.P.M. 5252 = B.H.P.	
Temperature				
°C = (°F - 32) / 1.8		°F = (°C x 1.8) + 32		
Flow Rate				
liter / min (dm ³ / min)	x 0.264	= US gal / min x 3.785	= liter / min	



S00244A

Note : () Non-Si Unit

Document Title: Specifications, general	Function Group: 030	Information Type: Service Information	Date: 3/25/2026
Profile:			

Specifications, general

Specifications

Item	Unit	Specification
Operating weight	kg	18500
	lb	40785
Minimum turning radius	mm	10400
	inch	409.4
Slew speed	rpm	12.3
Maximum travel speed	km / h	34
	mph	21.1
Maximum digging force (Normal / boost)	kg	10500 / 11540
	lb	23272 / 25441
Maximum drawbar pull	kg	10400
	lb	22928
Gradeability	%	62
	degree	32
Brake stopping distance (at 32 km/h)	m	10
	ft	33

Document Title: Specifications, general	Function Group: 030	Information Type: Service Information	Date: 3/25/2026
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Document Title: Standard tightening torque	Function Group: 030	Information Type: Service Information	Date: 3/25/2026
Profile:			


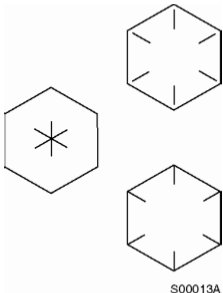
Standard tightening torque

The following charts give the standard tightening torques of screws and nuts. Exceptions are given in sections of "Disassembly and Assembly"

Tightening torque (meter)

Classification	4T, 5T	10T
Screw type	 S00010A	 S00011A
Screw size	Tightening torque kgf·m (lbf·ft)	Tightening torque kgf·m (lbf·ft)
M4	0.2 ± 0.02 (1.4 ± 0.1)	0.4 ± 0.04 (2.9 ± 0.3)
M5	0.3 ± 0.03 (2.2 ± 0.2)	0.8 ± 0.08 (5.8 ± 0.6)
M6	0.5 ± 0.05 (3.6 ± 0.4)	1.4 ± 0.14 (10.1 ± 1.0)
M8	1.2 ± 0.12 (8.7 ± 0.9)	3.3 ± 0.3 (23.8 ± 2.2)
M10	2.3 ± 0.23 (16.6 ± 1.7)	6.5 ± 0.7 (47 ± 5)
M12	4.0 ± 0.4 (29 ± 3)	11.3 ± 1.1 (82 ± 8)
<M14>	6.4 ± 0.6 (46 ± 4)	17.9 ± 1.8 (129 ± 13)
M16	9.5 ± 0.9 (69 ± 6)	26.7 ± 2.7 (193 ± 19)
<M18>	13.5 ± 1.4 (97 ± 10)	38.0 ± 3.8 (274 ± 27)
M20	18.6 ± 1.9 (134 ± 14)	52.2 ± 5.2 (377 ± 38)
<M22>	24.7 ± 2.5 (178 ± 18)	69.4 ± 6.9 (500 ± 50)
M24	32.1 ± 3.2 (232 ± 23)	90.2 ± 9.0 (650 ± 65)
M30	62.6 ± 6.3 (452 ± 45)	176.1 ± 17.6 (1270 ± 127)
M36	108.2 ± 10.8 (781 ± 78)	304.3 ± 30.4 (2200 ± 220)
M42	171.8 ± 17.2 (1240 ± 124)	483.2 ± 48.3 (3500 ± 350)
M45	211.3 ± 21.1 (1525 ± 152)	594.3 ± 50.4 (4300 ± 430)

Tightening torque (Inch)

Classification	4T, 5T	10T
Screw type	 S00010A	 S00013A
Screw size	Tightening torque kgf·m (lbf·ft)	Tightening torque kgf·m (lbf·ft)
1/4	0.6 ± 0.06 (4.3 ± 0.4)	1.7 ± 0.2 (12.2 ± 1.2)
5/16	1.2 ± 0.12 (8.7 ± 0.8)	3.0 ± 0.3 (21.7 ± 2.2)
3/8	2.0 ± 0.20 (14.4 ± 1.4)	5.6 ± 0.5 (40 ± 4)
7/16	3.2 ± 0.32 (23 ± 2)	8.9 ± 0.9 (64 ± 6)
1/2	4.7 ± 0.47 (34 ± 3)	13.4 ± 1.3 (97 ± 10)
9/16	6.8 ± 0.68 (50 ± 5)	19.0 ± 1.9 (137 ± 14)
5/8	9.3 ± 0.93 (67 ± 7)	26.1 ± 2.6 (190 ± 19)
3/4	16.0 ± 1.60 (115 ± 15)	45.1 ± 4.5 (325 ± 33)
7/8	25.5 ± 2.55 (185 ± 19)	71.6 ± 7.2 (520 ± 52)

1	38.0 ± 3.80 (275 ± 27)	106.9 ± 10.7 (770 ± 77)
1-1/8	54.1 ± 5.41 (390 ± 39)	152.2 ± 15.2 (1100 ± 110)
1-1/4	74.2 ± 7.42 (535 ± 54)	208.9 ± 20.9 (1510 ± 151)
1-3/4	98.8 ± 9.88 (710 ± 71)	277.8 ± 27.8 (2000 ± 200)
1-1/2	128.2 ± 12.82 (925 ± 93)	360.7 ± 36.1 (2600 ± 260)

This torque table does not apply to screws with nylon packings or where nonferrous metal washers are to be used, or which require tightening to a different specified torque, or tightening procedure.

- N·m (Newton meter) : 1 N·m ≅ 0.1 kgf·m

Tightening torque of split flange screws

Use these torques for split flange screws.

Tightening torque (split flange screws)

Thread diameter of screw (mm)	Width across flats (mm)	Tightening torque	
		kgf·m (lbf·ft)	N·m
10 12 16	14 17 22	6.7 ± 0.7 (48.4 ± 5) 11.5 ± 1 (83 ± 8) 28.5 ± 3 (206 ± 20)	65.7 ± 6.8 112 ± 9.8 279 ± 29

Tightening torque for hydraulic plugs with o-ring

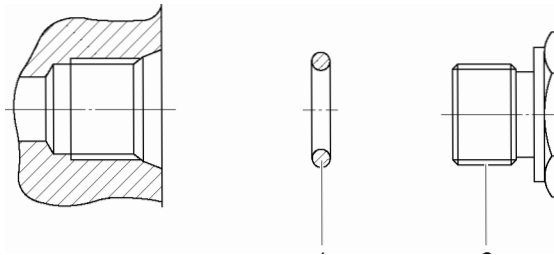


Figure 1

Hydraulic plugs with o-ring

1. O-ring
2. Plug

PF thread

Tightening torque (hydraulic plugs)

Thread	Plug part no.	Tightening torque kgf·m (lbf·ft)
1/8	9415 - 11012	2.5 ± 0.2 (18 ± 1.4)
1/4	9415 - 11022	5.0 ± 0.5 (36.1 ± 3.6)
3/8	9415 - 11032	7.5 ± 0.5 (54 ± 3.6)
1/2	9415 - 11042	11.0 ± 1.0 (79.4 ± 7.2)
3/4	9415 - 11052	18.0 ± 1.0 (130 ± 7)
1	9415 - 11062	21.0 ± 2.0 (152 ± 14)

Tightening torque for swivel nut fitting with o-ring

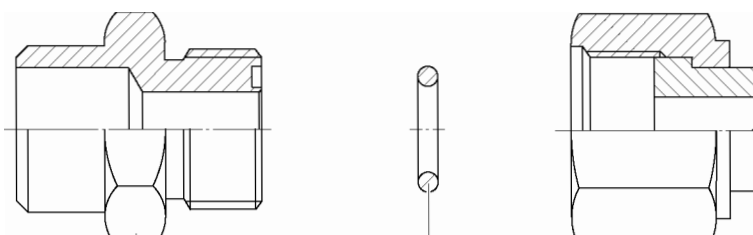


Figure 2

Swivel nut fitting with o-ring

1. Connector
2. O-ring
3. Swivel nut
4. Hose

Tightening torque for swivel nut fitting



Tube outer diameter(in)	Thread size (in)	Tightening torque of hose nut and fitting, kgf·m (lbf·ft)
1/2	UN 13/16 - 16	9.5 ± 0.95 (69 ± 7)
3/4	UN 1 3/16 - 12	18 ± 1.8 (130 ± 13)
1	UN 1 7/16 - 12	21 ± 2.1 (152 ± 15)

Document Title: Standard tightening torque	Function Group: 030	Information Type: Service Information	Date: 3/25/2026
Profile:			


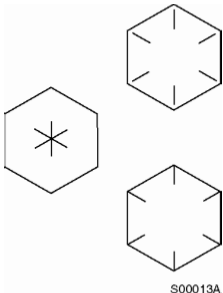
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7/16	3.2 ± 0.32 (23 ± 2)	8.9 ± 0.9 (64 ± 6)
1/2	4.7 ± 0.47 (34 ± 3)	13.4 ± 1.3 (97 ± 10)
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3/4	16.0 ± 1.60 (115 ± 15)	45.1 ± 4.5 (325 ± 33)
7/8	25.5 ± 2.55 (185 ± 19)	71.6 ± 7.2 (520 ± 52)

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1-1/8	54.1 ± 5.41 (390 ± 39)	152.2 ± 15.2 (1100 ± 110)
1-1/4	74.2 ± 7.42 (535 ± 54)	208.9 ± 20.9 (1510 ± 151)
1-3/4	98.8 ± 9.88 (710 ± 71)	277.8 ± 27.8 (2000 ± 200)
1-1/2	128.2 ± 12.82 (925 ± 93)	360.7 ± 36.1 (2600 ± 260)

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Tightening torque for hydraulic plugs with o-ring

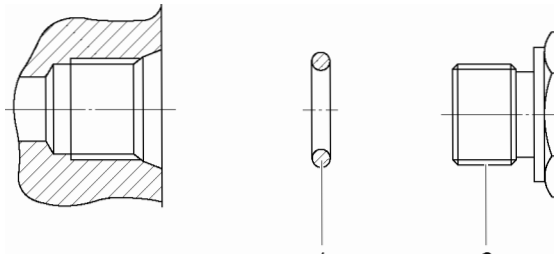


Figure 1

Hydraulic plugs with o-ring

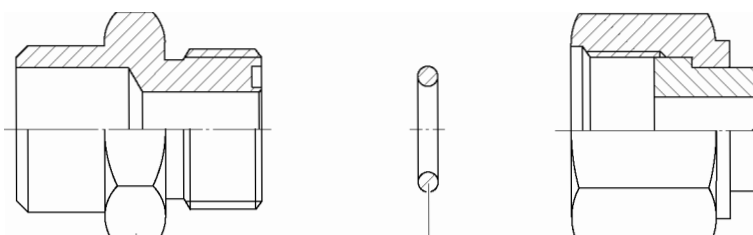
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PF thread

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1/4	9415 - 11022	5.0 ± 0.5 (36.1 ± 3.6)
3/8	9415 - 11032	7.5 ± 0.5 (54 ± 3.6)
1/2	9415 - 11042	11.0 ± 1.0 (79.4 ± 7.2)
3/4	9415 - 11052	18.0 ± 1.0 (130 ± 7)
1	9415 - 11062	21.0 ± 2.0 (152 ± 14)

Tightening torque for swivel nut fitting with o-ring



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Figure 2
Swivel nut fitting with o-ring

1. Connector
2. O-ring
3. Swivel nut
4. Hose

Tightening torque for swivel nut fitting

Tube outer diameter(in)	Thread size (in)	Tightening torque of hose nut and fitting, kgf·m (lbf·ft)
1/2	UN 13/16 - 16	9.5 ± 0.95 (69 ± 7)
3/4	UN 1 3/16 - 12	18 ± 1.8 (130 ± 13)
1	UN 1 7/16 - 12	21 ± 2.1 (152 ± 15)

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