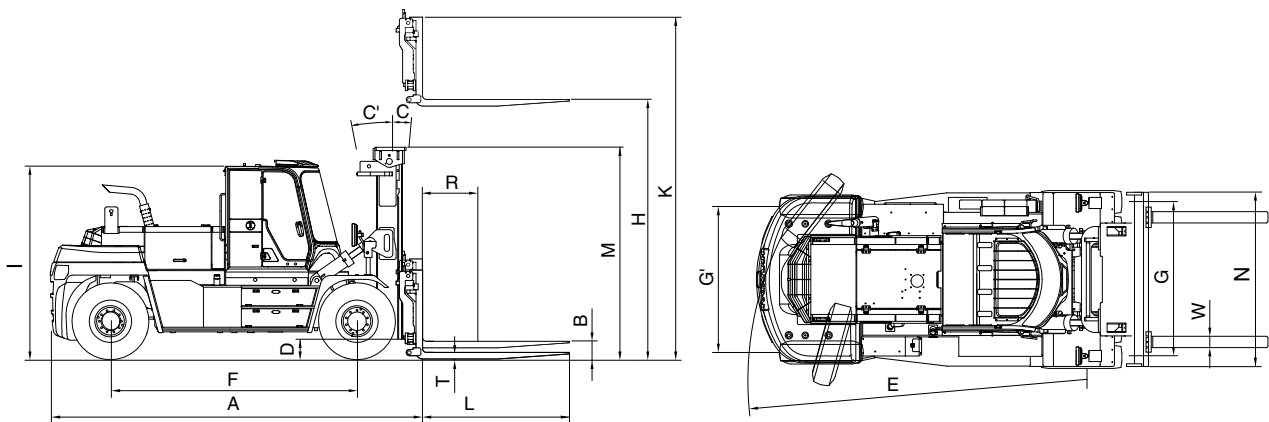


8. SPECIFICATIONS

1. SPECIFICATION TABLE



180D9VSP01

Model			Unit	180D-9V, 160D-9LV (EU)
Capacity			kg (lb)	18000 (40000)
Load center		R	mm (in)	900 (38)
Weight (Unloaded)			kg (lb)	25607 (56450)
Fork	Lifting height	H	mm (ft·in)	3320 (10' 11")
	Free lift	B	mm (ft·in)	0
	Lifting speed (Unload/Load)		mm/sec	380/400
	Lowering speed (Unload/Load)		mm/sec	400/500
	L×W×T	L,W,T	mm (in)	2450×250×100 (100×9.8×3.9)
Mast	Tilt angle (forward/backward)	C/C'	degree	10/10
	Max height	K	mm (ft·in)	4960 (16' 3")
	Min height	M	mm (ft·in)	3350 (11' 0")
Body	Travel speed (Unload)		km/h	38.4
	Gradeability (Load)		degree (%)	18.2 (32.9)
	Min turning radius (Outside)	E	mm (ft·in)	5220 (18' 1")
ETC	System set pressure		kgf/cm ²	240
	Hydraulic oil tank		ℓ (U.S.gal)	See page 7-61.
	Fuel tank		ℓ (U.S.gal)	260 (68.7)
Overall length		A	mm (ft·in)	5595 (18' 4")
Overall width		N	mm (ft·in)	2540 (8' 4")
Cabin height		I	mm (ft·in)	2990 (9' 10")
Ground clearance (Mast)		D	mm (in)	245 (9.6)
Wheel base		F	mm (ft·in)	3750 (12' 4")
Wheel tread front/rear		G/G'	mm (ft·in)	1860/2300 (6' 1" / 7' 7")

2. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

Item	Unit	Specification
Model	—	Cummins B6.7
Type	—	4 cycle turbocharged, charger air cooled diesel engine
Cooling Method	—	Water cooling
Number of cylinders and arrangement	—	6 cylinders, In-line
Firing order	—	1-5-3-6-2-4
Combustion chamber type	—	Direct injection
Cylinder bore X stroke	mm (in)	107 × 124 mm (4.21" × 4.88")
Piston displacement	cc (cu in)	6690 (409)
Compression ratio	—	17.3:1
Rated gross horse power	ps/rpm	284.2/2200
Maximum gross torque at rpm	kgf · m/rpm	131.4/1500
Engine oil quantity	ℓ (U.S.gal)	14.2 (3.8)
Dry weight	kg (lb)	5083 (1282)
High idling speed	rpm	2230±50
Low idling speed	rpm	700~1200
Rated fuel consumption	g/ps.hr	151.5
Starting motor	V-kW	DENSO, 24-7.5
Alternator	V-A	24-70
Battery	V-AH	24-100

2) MAIN PUMP

Item	Unit	Specification
Type	—	Axial piston variable pump
Capacity	cc/rev	72+72
Maximum operating pressure	bar	300
Rated speed (Max/Min)	rpm	2550/500

3) MAIN CONTROL VALVE

Item		Unit	Specification
Type		—	Sectional
Operating method		—	Hydraulic pilot
Lift section	Max flow	lpm	350
	Max pressure	bar	220
	Relief pressure	bar	220
Tilt section	Max flow	lpm	200
	Max pressure	bar	220
	Relief pressure	bar	220
Aux section	Max flow	lpm	220
	Relief pressure	bar	195

4) STEERING UNIT

Item	Unit	Specification
Type	—	Load sensing/Non load reaction/Dynamic signal
Capacity	cc/rev	520

5) POWER TRAIN DEVICES

Item			Specification
Torque converter	Model		W340, 1.773/271 (ZF SACH)
	Type		3 Element, 1 stage, 2 phase
	Stall ratio		1.773 : 1
Transmission	Type		Full auto, power shift
	Gear shift(FWD/REV)		3/3
	Adjustment		Electrical single lever type
	Overhaul ratio	FR	1 : 5.683 2 : 2.304 3 : 0.963
		RR	1 : 5.041 2 : 2.044 3 : 0.854
Axle	Type		Front-wheel drive type, fixed location
	Gear ratio		11.73 : 1
	Gear		Ring & pinion gear type
Wheels	Q'ty(FR/RR)		Double : 4/2
	Front(drive)		12.00 R20
	Rear(steer)		12.00 R20
Brakes	Travel		Front wheel, wet disc brake
	Parking		Axle pinion, hydraulic released caliper brake
Steering	Type		Full hydraulic, power steering
	Steering angle		71.9° to both right and left angle, respectively

3. TIGHTENING TORQUE

NO	Item		Size	kgf · m	lbf · ft
1	Engine	Engine mounting bolt, nut	M24×3.0	100±15	723±109
2		Radiator mounting bolt, nut	M12×1.75	12.8±3.0	93±22
3	Hydraulic system	Hydraulic pump mounting bolt	M12×1.75	12.8±3.0	93±22
4		MCV mounting bolt, nut	M12×1.75	14.7±2.2	106±15.9
5		Steering unit mounting bolt	M10×1.5	4.0±0.5	28.9±3.6
6		Tilt cylinder; rod-end bolt, nut	M14×2.0	19.6±4.0	142±28.9
7	Power train system	Transmission mounting bolt, nut	M20×2.5	100±15	723±109
8		Torque converter mounting bolt	M10×1.5	4.5±0.6	32.5±4.3
9		Drive axle mounting bolt, nut	M24×3.0	100±15	723±109
10		Steering axle mounting bolt, nut	M24×3.0	100±15	723±109
11		Front wheel mounting nut	M22×1.5	84±12	608±87
12		Propeller shaft(To T/M)	M12×1.5	15±2	109±14.5
		Propeller shaft(To D/Axle)	M12×1.75	12.3±2.5	89±18
13	Others	Counterweight mounting bolt 1	M30×3.5	199±29.9	1439±216
		Counterweight mounting bolt 2	M24×3.0	100±15	723±109
14		Operator's seat mounting nut	M 8×1.25	3.4±0.7	24.6±5
15		Cab mounting nut	M16×2.0	29.7±4.5	215±32
16		Mast mounting bolt	M14×2.0	19.6±2.9	144±23