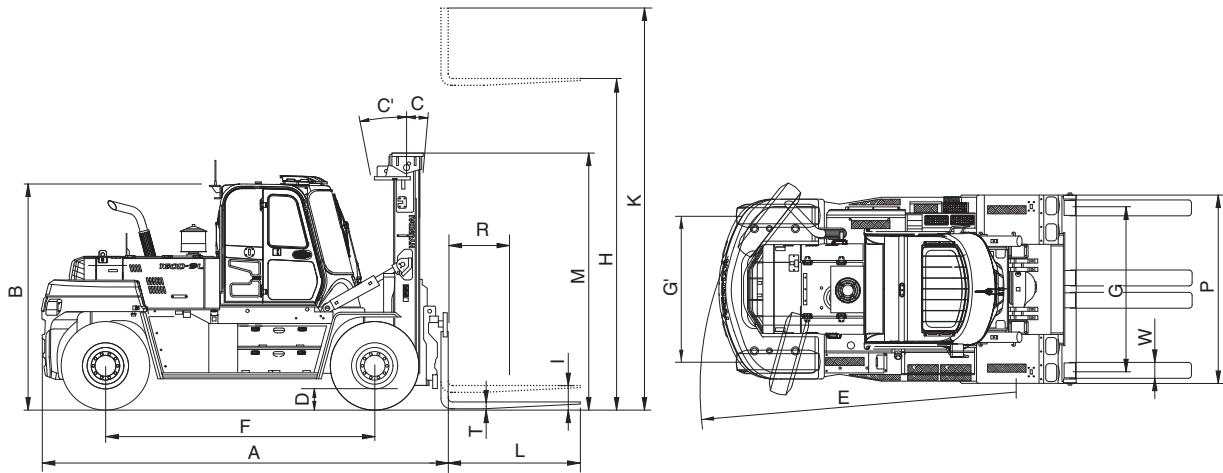


8. SPECIFICATIONS

1. SPECIFICATION TABLE



160D9LSP01

Model			Unit	160D-9L	180D-9L
Capacity			kg (lb)	16000 (35300)	18000 (40000)
Load center		R	mm (in)	1200 (47.2)	900 (35.4)
Weight (Unloaded)			kg (lb)	23954 (52810)	
Fork	Lifting height	H	mm (ft·in)	3020 (9' 11")	
	Free lift	I	mm (ft·in)	0	
	Lifting speed (Unload/Load)		mm/sec	450/350	285/420
	Lowering speed (Unload/Load)		mm/sec	390/430	300/420
	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 (15/10 opt)	
	Max height	K	mm (ft·in)	4665 (15' 3")	
	Min height	M	mm (ft·in)	3200 (10' 6")	
Body	Travel speed (Unload)		km/h	35.2	
	Gradeability (Load)		degree (%)	17.2 (31)	16.4 (29.4)
	Min turning radius (Outside)	E	mm (ft·in)	5220 (18' 1")	
ETC	Operating pressure		kgf/cm ²	230	
	Hydraulic oil tank		l (U.S.gal)	203 (53.6)	
	Fuel tank		l (U.S.gal)	276 (72.9)	
Overall length		A	mm (ft·in)	5564 (18' 3")	
Overall width		P	mm (ft·in)	2540 (8' 4")	
Cabin height		B	mm (ft·in)	3075 (10' 1")	
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)	1860/2033 (6' 1" / 6' 8")	

2. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

Item	Unit	Specification
Model	-	Cummins QSB6.7
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 × 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	165.8/2300
Maximum gross torque at rpm	kgf · m/rpm	74.7/1500
Engine oil quantity	l (U.S.gal)	14.2 (3.8)
Dry weight	kg (lb)	520 (1146)
High idling speed	rpm	2230 ± 50
Low idling speed	rpm	700~1200
Rated fuel consumption	g/ps.hr	168
Starting motor	V-kW	DENSO, 24-3.7
Alternator	V-A	24-70
Battery	V-AH	24-100

2) MAIN PUMP

Item	Unit	Specification
Type	-	Variable displacement axial piston pump
Capacity	cc/rev	74+63
Maximum operating pressure	bar	300
Rated speed (Max/Min)	rpm	2800/300

3) MAIN CONTROL VALVE

Item	Unit	Specification
Type	-	Sectional
Operating method	-	Hydraulic pilot
Main relief valve pressure	bar	230/165
Flow capacity	lpm	180

4) STEERING UNIT

Item	Unit	Specification
Type	-	Load sensing / Non load reaction / Dynamic signal
Capacity	cc/rev	520
Rated flow	lpm	63

5) POWER TRAIN DEVICES

Item		Specification		
Torque converter	Model	05 W 340 (ZF SACH)		
	Type	3 Element, 1 stage, 2 phase		
	Stall ratio	2.362 : 1		
Transmission	Type	Full auto, Power shift		
	Gear shift (FR / RR)	3/3		
	Adjustment	Electrical single lever type		
	Overhaul ratio	FR	1 : 5.630	2 : 2.396
		RR	1 : 5.647	2 : 2.404
Axle	Type	Front-wheel drive type, fixed location		
	Gear ratio	12.7 : 1		
	Gear	Ring & pinion gear type		
Wheels	Q'ty (FR / RR)	Double : 4/2		
	Front (drive)	12.00-20-20PR		
	Rear (steer)	12.00-20-20PR		
Brakes	Travel	Front wheel, Wet disk brake		
	Parking	Axle pinion, caliper brake, hydraulic released		
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 (bracket-frame)	M24×3.0	100±15	723±109
2		Engine mounting bolt (engine-bracket)	M12×1.75	12.3±2.4	89.0±17.4
3		Radiator mounting bolt, nut	M12×1.75	12.8±3.0	92±21.7
4	Hydraulic system	Hydraulic pump mounting socket bolt	M12×1.75	14.7±2.2	10.6±26.0
5		MCV mounting bolt, nut	M10×1.5	6.9±1.4	49.9±10.1
6		Steering unit mounting bolt	M10×1.5	6.9±1.4	49.9±10.1
7		Tilt cylinder; rod-end bolt, nut	M14×2.0	19.6±4.0	142±28.9
8	Power train system	Transmission mounting bolt, nut (top)	M16×2.0	29.7±4.5	215±32.5
		Transmission mounting bolt, nut (side)	M20×2.5	60.5±5.5	438±39.8
9		Torque converter mounting socket bolt	M10×1.5	4.5±0.6	32.5±4.3
10		Drive axle mounting bolt, nut	M24×2.0	100±15	723±109
11		Steering axle mounting bolt, nut	M24×3.0	100±15	723±109
12		Front/Rear wheel mounting nut	M22×1.5	83.2±10	602±72.3
13		Propeller shaft mounting bolt, nut	M12×1.75	15.0±2.0	108±14.5
14	Others	Counterweight mounting bolt 1, 2, 3	M30×3.5	199±29.9	1440±216
15		Operator's seat mounting nut	M 8×1.25	3.4±0.7	24.6±5.1
16		Cab mounting nut	M16×2.0	7.5	54.2
17		Mast mounting pin fix bolt	M12×1.75	12.5±1.3	90.4±9.4