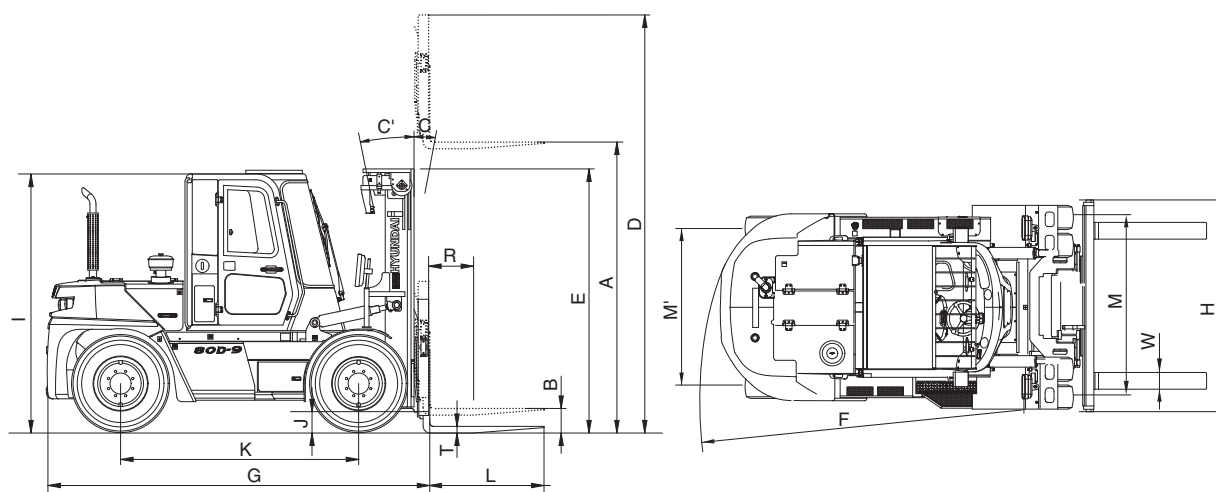


8. SPECIFICATIONS

1. SPECIFICATION TABLE



80D9SP011

Model			Unit	80D-9
Capacity			kg (lb)	8000 (17650)
Load center			mm (in)	600 (24")
Weight(Unloaded)			kg (lb)	11608 (25590)
Fork	Lifting height	A	mm (ft·in)	3040 (9' 11")
	Free lift	B	mm (in)	145 (5.7")
	Lifting speed (Unload/Load)		mm/sec	480/410
	Lowering speed (Unload/Load)		mm/sec	500/500
	L × W × T	L,W,T	mm (in)	1200 × 180 × 70 (47.2 × 7.1 × 2.8)
Mast	Tilt angle (forward/backward)	C/C'	degree	15/10
	Max height	D	mm (ft·in)	4375 (14' 4")
	Min height	E	mm (ft·in)	2675 (8' 9")
Body	Travel speed (Unload)		km/h	35
	Gradeability (Load)		%	35.2
	Min turning radius (Outside)	F	mm (ft·in)	3700 (12' 4")
ETC	Max hydraulic pressure		kgf/cm²	210
	Hydraulic oil tank		l (USgal)	115 (30)
	Fuel tank		l (USgal)	171.5 (45.3)
Overall length		G	mm (ft·in)	3971 (13' 0")
Overall width		H	mm (ft·in)	2194 (7' 2")
Cabin height		I	mm (ft·in)	2640 (8' 8")
Ground clearance		J	mm (in)	250 (9.8")
Wheel base		K	mm (ft·in)	2500 (8' 2")
Wheel tread front/rear		M/M'	mm (ft·in)	1632/1700 (5' 4"/5' 7")

2. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

Item	Unit	Specification
Model	-	Cummins QSF 3.8
Type	-	Water-cooled, 4-cycle DI diesel engine
Cooling Method	-	Water cooling
Number of cylinders and arrangement	-	4-cylinders, In-line
Firing order	-	1-3-4-2
Combustion chamber type	-	Direct injection
Cylinder bore × stroke	mm (in)	102 × 115 mm (4.01" × 4.53")
Piston displacement	cc (cu in)	3800 (230)
Compression ratio	-	17.2 : 1
Rated gross horse power	ps/rpm	102/2200
Maximum gross torque at rpm	kgf · m/rpm	42.3/1600
Engine oil quantity	l (U.S.gal)	12 (3.2)
Dry weight	kg (lb)	348
High idling speed	rpm	2500
Low idling speed	rpm	850
Rated fuel consumption	g/kw.hr	220 (at 1600 rpm)
Starting motor	V-kW	24-4.8
Alternator	V-A	24-80
Battery	V-AH	24-80

2) MAIN PUMP

Item	Unit	Specification
Type	-	Extended gear pump
Capacity	cc/rev	35.6+33+7.6
Maximum operating pressure	bar	210
Rated speed (Max/Min)	rpm	3000/600

3) MAIN CONTROL VALVE

Item	Unit	Specification
Type	-	Sectional
Operating method	-	Hydraulic pilot
Relief valve pressure (Main/2nd)	bar	188/153
Flow capacity	lpm	160

4) STEERING UNIT

Item	Unit	Specification
Type	—	Load sensing/Non load reaction/Dynamic signal
Capacity	cc/rev	200
Rated flow	lpm	32

5) POWER TRAIN DEVICES

Item		Specification		
Torque converter	Model	ZF 3WG94		
	Type	3 Element, 1 stage, 2 phase		
	Stall ratio	2.395 : 1		
Transmission	Type	Full auto, power shift		
	Gear shift (FR/RR)	3/3		
	Adjustment	Electrical single lever type		
	Overhaul ratio	FR	1 : 4.714	2 : 2.341
		RR	1 : 4.711	2 : 2.340
Axle	Type	Front-wheel drive type, fixed location		
	Gear ratio	12.4		
	Gear	Ring & Pinion gear type		
Wheels	Q'ty (FR/RR)	Double : 4/2		
	Front (drive)	9.00-20-14 PR		
	Rear (steer)	9.00-20-14 PR		
Brakes	Travel	Front wheel, wet disc brake		
	Parking	Ratchet, drum brake		
Steering	Type	Full hydraulic, power steering		
	Steering angle	75.04° to both right and left angle, respectively		

3. TIGHTENING TORQUE

NO	Item		Size	kgf · m	lbf · ft
1	Engine	Engine mounting bolt, nut	M10×1.5	6.9±1.3	50±9.4
2		Engine bracket mounting bolt	M12×1.25	12.2±3.0	89±21.7
3		Radiator mounting bolt, nut	M10×1.5	6.9±1.3	50±9.4
4	Hydraulic system	Hydraulic pump mounting bolt	M16×2.0	29.7±4.5	215±32.3
5		MCV mounting bolt, nut	M12×1.75	12.8±3.0	93±21.7
6		Steering unit mounting bolt	M10×1.5	6.9±1.4	50±10.1
7	Power train system	Transmission mounting bolt, nut	M16×2.0	7.5	54
8		Torque converter mounting bolt	M10×1.5	6.9±1.4	50±10.1
9		Drive axle mounting bolt, nut(#0037)	M24×3.0	100±15	723±109
10		Drive axle mounting bolt, nut(#0038-)	M27×3.0	150±15	1085±109
11		Steering axle mounting bolt, nut	M20×2.5	57.9±8.7	419±63
12		Front/Rear wheel mounting nut	M22×1.5	61.2±9.2	443±66.5
13		Propeller shaft (To D/Axle)	3/8-24UNF	7±0.7	50.6±5.0
14	Others	Counterweight mounting bolt	M30×3.5	199±29.9	1439±216
15		Operator's seat mounting nut	M 8×1.25	3.4±0.7	24.6±5.1
16		Cab mounting nut	M20×2.5	57.9±8.7	419±63
17		Mast mounting bolt	M20×2.5	57.9±8.7	419±63