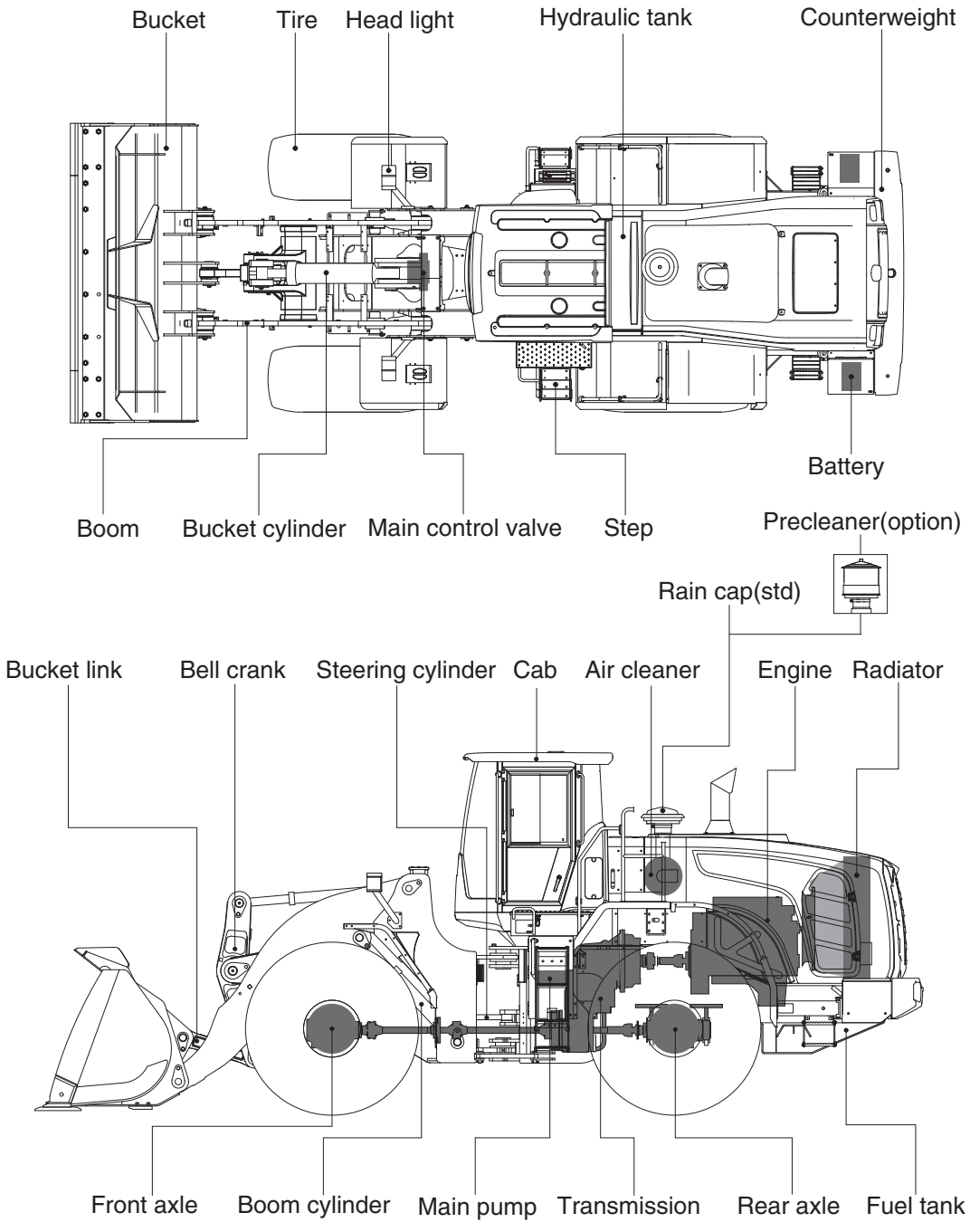
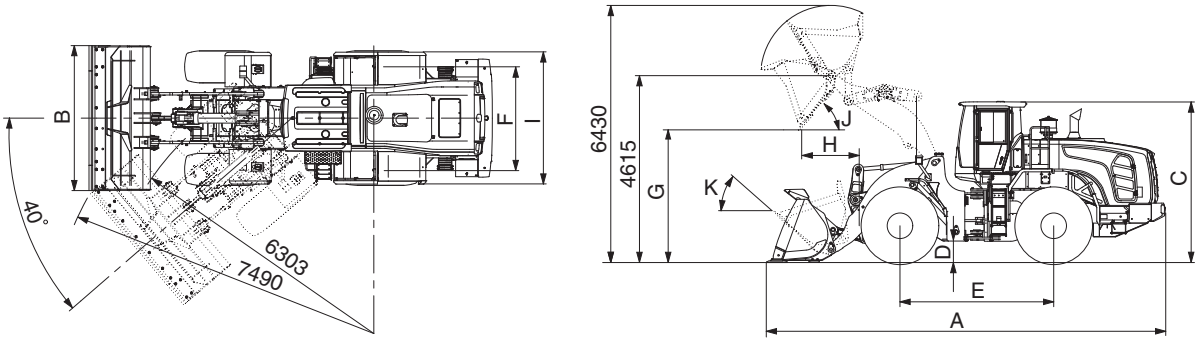
1. MAJOR COMPONENTS



9802SE01

2. SPECIFICATIONS

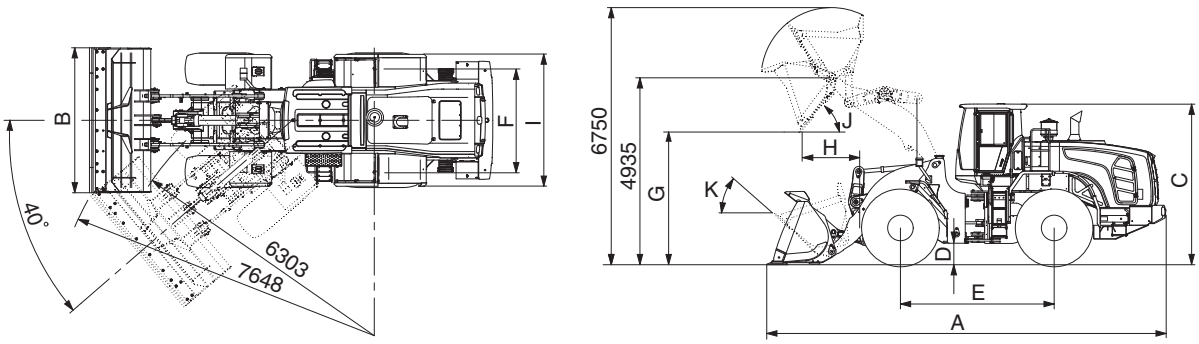
1) WITH BOLT-ON CUTTING EDGE TYPE BUCKET (HL980)



9802SE03

Description			Unit	Specification
Operating weight			kg (lb)	31000 (68340)
Bucket capacity		Struck	m^3 (yd^3)	4.8 (6.3)
		Heaped		5.6 (7.3)
Overall length		A	mm (ft-in)	9610 (31' 6")
Overall width		B		3450 (11' 4")
Overall height		C		3865 (12' 8")
Ground clearance		D		495 (1' 7")
Wheelbase		E		3700 (12' 2")
Tread		F		2440 (8' 0")
Dump clearance at 45˚		G		3300 (10' 10")
Dump reach (full lift)		H		1500 (4' 11")
Width over tires		I		3160 (10' 4")
Dump angle		J	degree (˚)	50
Roll back angle (carry position)		K		47
Cycle time		Lift (with load)	sec	6.6
		Dump (with load)		1.4
		Lower (empty)		4.0
Maximum travel speed			km/hr (mph)	36.5 (22.7)
Braking distance			m (ft-in)	13 (42' 8")
Minimum turning radius (center of outside tire)				6.30 (20' 8")
Gradeability			degree (˚)	30
Breakeout force			kg (lb)	24640 (54320)
Travel speed	Forward	First gear	km/hr (mph)	6.1 (3.8)
		Second gear		11.4 (7.1)
		Third gear		17.9 (11.1)
		Fourth gear		36.5 (22.7)
	Reverse	First gear		6.1 (3.8)
		Second gear		11.4 (7.1)
		Third gear		25.0 (15.5)

WITH BOLT-ON CUTTING EDGE TYPE BUCKET (HL980 XT)



9802SE03-1

Description			Unit	Specification
Operating weight			kg (lb)	31700 (69890)
Bucket capacity		Struck	m^3 (yd^3)	4.8 (6.3)
		Heaped		5.6 (7.3)
Overall length		A	mm (ft-in)	9930 (32' 7")
Overall width		B		3450 (11' 4")
Overall height		C		3865 (12' 8")
Ground clearance		D		485 (1' 7")
Wheelbase		E		3700 (12' 2")
Tread		F		2440 (8' 0")
Dump clearance at 45˚		G		3615 (11' 10")
Dump reach (full lift)		H		1525 (5' 0")
Width over tires		I		3220 (10' 7")
Dump angle		J	degree (˚)	50
Roll back angle (carry position)		K		47
Cycle time		Lift (with load)	sec	6.6
		Dump (with load)		1.3
		Lower (empty)		4.0
Maximum travel speed			km/hr (mph)	36.5 (22.7)
Braking distance			m (ft-in)	13 (42' 8")
Minimum turning radius (center of outside tire)				6.30 (20' 8")
Gradeability			degree (˚)	30
Breakeout force			kg (lb)	23130 (50990)
Travel speed	Forward	First gear	km/hr (mph)	6.1 (3.8)
		Second gear		11.4 (7.1)
		Third gear		17.9 (11.1)
		Fourth gear		36.5 (22.7)
	Reverse	First gear		6.1 (3.8)
		Second gear		11.4 (7.1)
		Third gear		25.0 (15.5)

3. WEIGHT

Item		kg	lb
Front frame assembly		2920	6440
Rear frame assembly		3280	7230
Front fender (LH/RH)		52/52	115/115
Counterweight (HL980)		1200	2650
Counterweight (HL980 XT)		1750	3860
Cab assembly		994	2190
Engine assembly		1075	2370
Transmission assembly		854	1880
Drive shaft (front)		25	55
Drive shaft (center)		48	106
Drive shaft (rear/upper)		30/14	66/31
Front axle (include differential)		1810	3990
Rear axle (include differential)		1820	4010
Tire (29.5 R25, ★L3)		555	1220
Hydraulic tank assembly		275	606
Fuel tank assembly		474	1040
Main pump assembly/Steering pump assembly		45/45	99/99
Fan & brake pump assembly		12	26
Main control valve (2 spool/3 spool)		88/104	194/229
Flow amplifier		29	64
Boom assembly	HL980	2100	4630
	HL980 XT	2110	4650
Bell crank assembly		645	1420
Bucket link		97	214
5.6 m^3 bucket, with bolt on cutting edge		2810	6190
Boom cylinder assembly		300	661
Bucket cylinder assembly		305	672
Steering cylinder assembly		60	132
Seat		80	176
Battery		58	127

4. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Scania DC13
Type	4-cycle turbocharged, charge air cooled diesel engine
Control type	Electronic control
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 type
Cylinder bore × stroke	130 × 160 mm (5.1" × 6.3")
Piston displacement	12700 cc (775 cu in)
Compression ratio	17.5 : 1
Rated gross horse power	380 hp at 1800 rpm
Maximum gross torque (1300 rpm)	180 kgf · m (1302 lbf · ft)
Engine oil quantity	45 ℓ (11.9 U.S. gal)
Wet weight	1075 kg (2370 lb)
High idling speed	2100 ± 50 rpm
Low idling speed	750 ± 25 rpm
Rated fuel consumption	202 g/kW · hr
Starting motor	Nippondenso (24 V - 6.0 kW)
Alternator	Bosch (24 V - 100 Amp)
Battery	2 × 12 V × 220 Ah

2) STEERING PUMP / MAIN PUMP

Item	Specification	
	Steering pump	Main pump
Type	Variable tandem piston pump	
Capacity	110 cc/rev	100 cc/rev
Maximum operating pressure	280 kgf/cm^2 (3980 psi)	
Rated oil quantity	208 ℓ /min (54.9 U.S.gpm)	189 ℓ /min (49.9 U.S.gpm)
Engine high rpm	2100 rpm	

3) FAN + BRAKE PUMP

Item	Specification	
	Fan pump	Brake pump
Type	Piston pump	
Capacity	45 cc/rev	
Maximum operating pressure	250 kgf/cm^2 (3980 psi)	150 kgf/cm^2 (2130 psi)
Rated oil quantity	101 ℓ/min (26.7 U.S.gpm)	
Engine high rpm	2100 rpm	

4) MAIN CONTROL VALVE

Item	Specification
Type	2 spool (mono block)
Operating method	Hydraulic pilot assist
Main relief valve pressure	280 kgf/cm^2 (3980 psi)
Overload relief valve pressure	340 kgf/cm^2 (4840 psi)

5) ELECTRO-HYDRAULIC BLOCK

Item	Specification
Type	Proportional pressure reducing valve
Control current	0~950 mA
Resistance	10.5 Ω
Normal flow	12 ℓ/min (3.17 U.S.gpm)

6) REMOTE CONTROL VALVE (EH TYPE)

Item	Specification
Type	Fingertip
Axle	Single axle for boom, bucket, auxiliary
Operating voltage	4.5~5.5 V
Output signal	0.5~4.5 V (neutral 2.5 V)

7) REMOTE CONTROL VALVE (FNR TYPE)

Item	Specification
Type	Joystick
Axle	Two axle for boom, bucket, roller for auxiliary
Operating type	CAN J1939
Baud rate	500 kbps

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	ø 180 × ø 105 × 885 mm
Bucket cylinder (HL980)	Bore dia × Rod dia × Stroke	ø 200 × ø 110 × 550 mm
Bucket cylinder (HL980 XT)	Bore dia × Rod dia × Stroke	ø 200 × ø 110 × 545 mm
Steering cylinder	Bore dia × Rod dia × Stroke	ø 105 × ø 55 × 480 mm

9) DYNAMIC POWER TRANSMISSION DEVICES

Item			Specification
4-speed transmission (std)	Model		ZF 4WG 310
	Type	Converter	Single-stage, single-phase
		Transmission	Full-automatic power shift
	Converter stall ratio		2.51 : 1
	Gear shift		Forward fourth gear, reverse third gear
	Control		Electrical single lever type, kick-down system Automatic kick down from 2nd to 1st gear FNR switch on joystick lever (option)
	Pump rated flow		135 ℓ /min (35.7 U.S.gpm) at 2000 rpm
	Travel speed		See the page 2-2.
5-speed transmission (opt)	Model		ZF 5WG 310
	Type	Converter	Single-stage, double-phase (with lock up clutch)
		Transmission	Full-automatic power shift
	Converter stall ratio		2.51 : 1
	Gear shift		Forward fifth gear, reverse third gear
	Control		Electrical single lever type, kick-down system Automatic kick down from 2nd to 1st gear FNR switch on joystick lever (option)
	Pump rated flow		135 ℓ /min (35.7 U.S.gpm) at 2000 rpm
	Travel speed	Forward 1/2/3/4/5	6.1 / 11.8 / 18.3 / 26.8 / 40.0 km/hr
		Reverse 1/2/3	6.1 / 11.8 / 26.8 km/hr
Axle	Drive devices		4-wheel drive
	Front		Front fixed location
	Rear		Oscillation ±13˚ of center pin-loaded
Wheels	Tires		29.5 R25, ★(L3)
Brakes	Travel		Four-wheel, wet-disc type, full hydraulic
	Parking		Spring applied, hydraulic released brake on T/M
Steering	Type		Full hydraulic, articulated
	Steering angle		40˚ to both right and left angle, respectively