

SAMSUNG



SL180-2

SAMSUNG WHEEL LOADER

Flywheel Horsepower; **152 kW** **203 hp**

Bucket Capacity; **2.8 m³** **3.7 cu.yd**

Operating Weight; **16400 kg** **36160 lb**



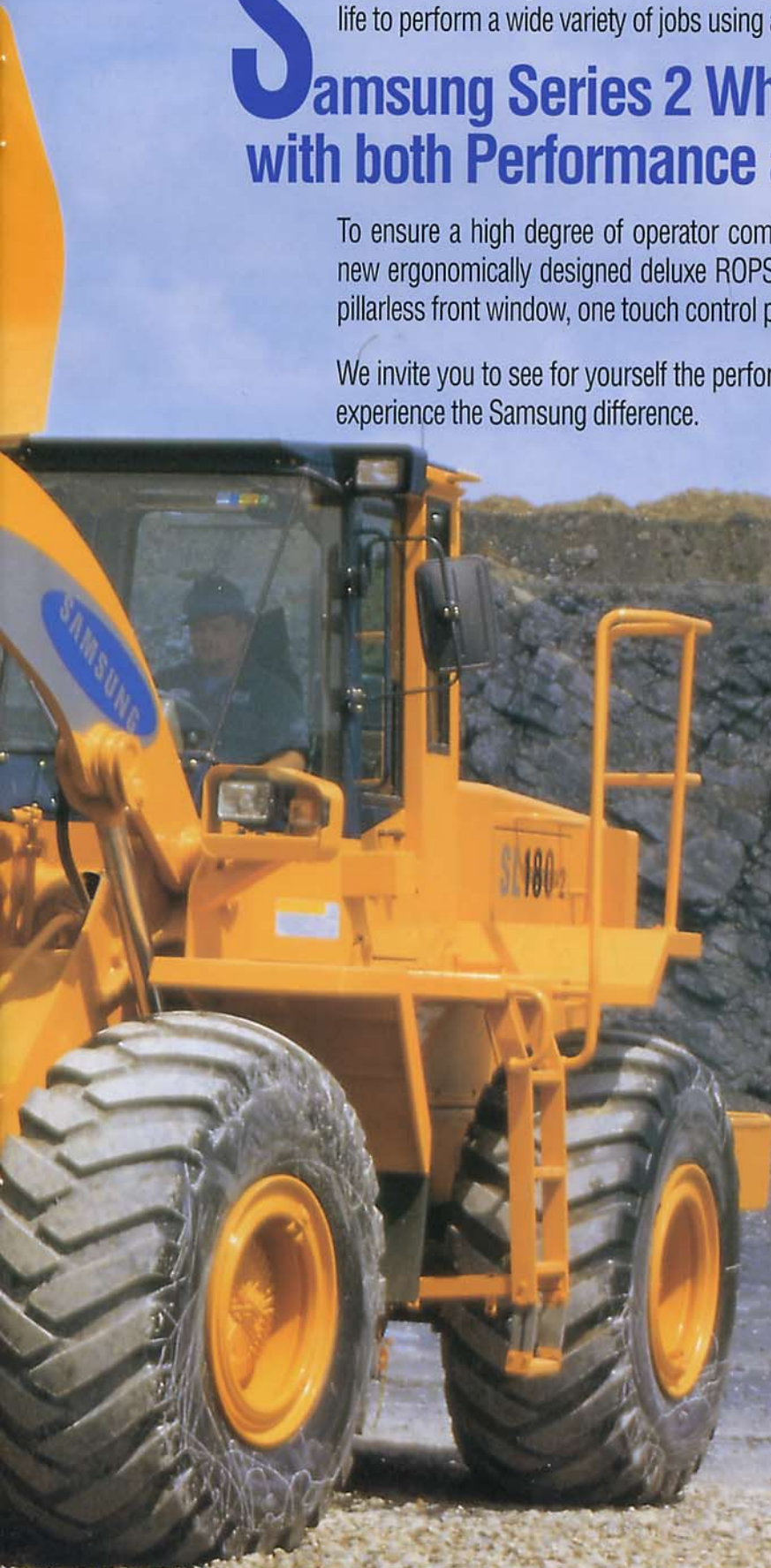
Samsung's many years of experiences in building and designing construction equipment were used in developing our Series 2 Wheel Loader. The heavy duty Series 2 Wheel Loaders offer modern technology and quality components such as; a powerful Cummins Engine and a 4×3 full power shift transmission to enhance the operational performance of these machines. We've added features such as a transmission kick-down switch, auto bucket leveler, auto boom lift kick-out and torque proportioning differentials.

In addition, the fully enclosed, dual circuit, wet disk brakes provide superior braking and long life to perform a wide variety of jobs using attachments other than buckets.

Samsung Series 2 Wheel Loaders, Designed with both Performance and Versatility in Mind.

To ensure a high degree of operator comfort and a fatigue free working environment, the new ergonomically designed deluxe ROPS Cab features a KAB seat, tiltable steering wheel, pillarless front window, one touch control panel with integrated climate control.

We invite you to see for yourself the performance of the new Series 2 Wheel Loaders and to experience the Samsung difference.

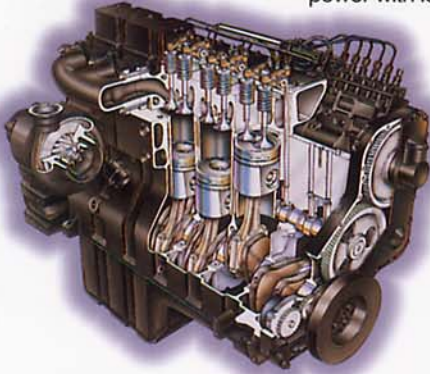


Higher Performance and More Productivity

Powerful Cummins Engine

The Cummins engine is world renowned for its power and reliability. Its excellent combustion efficiency provides maximum power with low fuel

consumption, even in cold weather. The world-wide Cummins dealer network assures that parts and service support is readily available.



Machine Stability

A long wheel base with a wide tread width provides excellent balance for maximum performance and safety.

Wheel Base (A)	Tread (B)
3200mm (10' 6")	2100mm (6' 11")



High Performance Z-Bar Linkage

Z-bar linkage provides excellent breakout force and loader speed for digging, loading and dumping applications.

The Powerful Breakout Force and Tractive Effort

Engine power and loader hydraulics are matched to provide maximum breakout force up to 16.7 tons and the maximum tractive effort up to 18.2 tons respectively for fast cycle times and maximum productivity.



The Outstandingly Endurable Axle

A full floating axle is easy to service and provides long life.



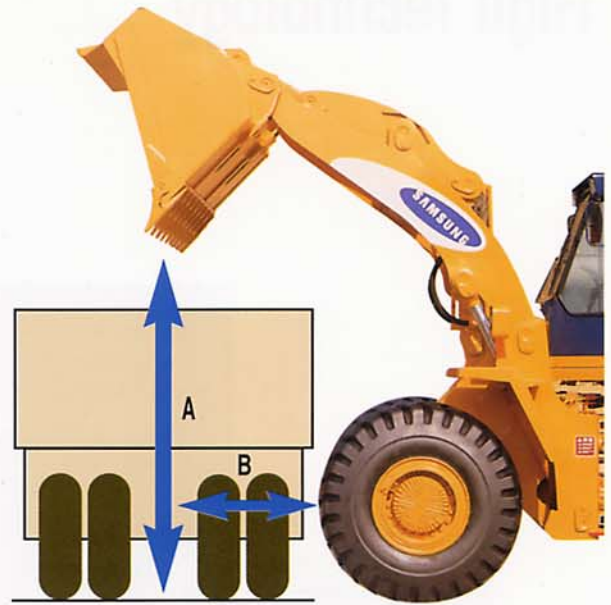
Steering Shock Dampening Device

Steering cylinder cushion dampens shocks when fully steered in one direction.

Excellent Loading Characteristics

A high dump clearance and long reach allows for fast, efficient truck loading. Our new link system softens the dumping impact for operator comfort.

Dump clearance (A)	Reach (B)
2955mm (9' 8")	1110mm (3' 8")



Easy Starting at Low Temperature

A standard air heater is available for cold weather starting.

The Highest Working Speed Compared to Similar Machines

The general working speed is 10.9 sec., which is the fastest among the same sized machines. The travel speed can be shifted by 4 stages forwards and 3 stages backwards, so the operator can freely select the relevant shift of transmission. And the maximum travel speed of quick movement from the job site to another job site is also possible.



High Technology

A Pressurized Cab

A pressurized cab and air filtration system keeps the cab interior clean and comfortable.



Tiltable Steering Wheel

The steering wheel can be adjusted for operator comfort and better productivity.

3-stage Controlled Wiper

A 3-stage rear wiper (two continuous stages and one intermittent) provides increased visibility when working in rainy conditions.

Lever Controls

The operator can select dual or single lever joy stick control for an optimum operation.

Special Design for Low-Noise & Low-Vibration

By attaching the special dustproof material, and lowering the noise level to 76dB(A), the machine endurance has been enhanced and it reduces the operators fatigue by offering the ultimate working conditions.

Integrated Air Conditioning/Heating System with Large Capacity

The operator can easily control the temperature and wind direction with one-touch system like that of a passenger car. The defroster on the front windshield offers operator's convenience while working in winter.

Horn, Light, and Wiper Controls

The horn, light, and windshield wiper are controlled with a convenient lever on the right side of the steering console.

Self-Diagnostic Monitor System

The Self-Diagnostic Monitor System indicates the abnormal conditions of the machine and enhances its serviceability. The symbols show on the switchboard, so the operator can take emergency measures on the spot.



Automatic Power Shift

Automatic power shift transmission is equipped with the electro-hydraulic control unit for high productivity and serviceability.



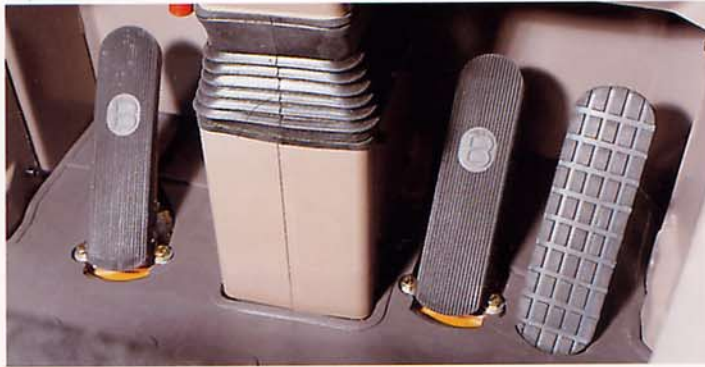
<Shift pattern of an auto-transmission>

Gear select	1st Speed	2nd Speed	3rd Speed	4th Speed
4th	←	Auto speed change →		
3rd	←	2nd-4th speed →		
2nd	←	2nd-3rd speed →		
1st	←	2nd speed →		
	1st speed			



Multi-Function Brake Pedal

The brake pedals require low pedal effort and positive braking power. The left pedal can be set to brake against the power of the machine, or to declutch transmission before applying the brake. The right pedal brakes against the power of the machine at all times.

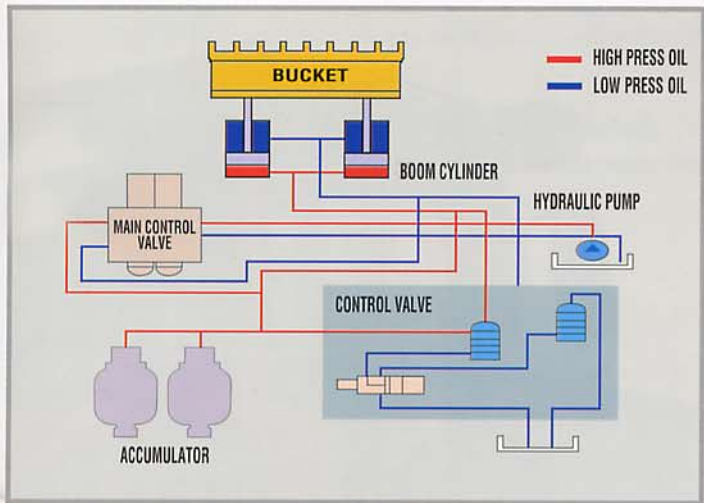


State of the Art Technology for Improved Loader Efficiency

Ride Control System

At the touch of a switch, Ride Control dampens the bounce over uneven ground conditions. Ride Control is an optional feature designed for smooth operation and increasing bucket capacity for greater productivity.





Wet Disk Brake

Wet disk brakes provide positive stopping power. The brakes are located at the wheel end, oil cooled for long life, enclosed to keep out dirt and provide easy service access. A dual system design allows for independent front and rear wheel braking.



Improved Accelerator

The pedal effort for the accelerator has been lowered to provide the operator with easy operation for increased efficiency.

Auto Bucket Leveler and Auto Boom Lift Kick-out

Return-to-dig and height control are standard features that increase operator efficiency and productivity.

Bell Crank Pin Guard

The bell crank pin guard prevents pin wear caused by infiltration of dirt, resulting in enhanced durability.

Parking Brake

The safe and comfortable parking brake which is the same as that of passenger car provides excellent performance.

Lever Lock Safety Device

A safety switch is provided to prevent accidental activation of the hydraulic levers.

Kick-down Switch

A kick-down switch located on the top of the loader control lever allows the operator to quickly shift from 2nd to 1st by simply pushing the button. The transmission will automatically shift back to 2nd when the operator changes direction or pushes the button again.



Electric Shift Lever

The twist grip electric shift lever is located on the left side of the steering console where it is easy for the operator to change direction or select the desired gear.

Durability, Maintenance Support System

Hinged Radiator Grill

A hinged radiator grill allows quick and simple access to the radiator for easy cleaning. The grill is designed with sound absorbent materials reducing noise levels.



Airgun(Optional)

The airgun is particularly useful for on-site service and for cleaning the cab interior, the radiator core and for tire inflation.





Easy Servicing

Wide opening access doors make engine compartment checks and filter replacement fast and easy.

Hydraulic Oil Sight Gauge

A sight gauge is installed on the outside of the hydraulic tank for a quick check of the hydraulic oil level.

Starter Safety Interlock

Safety relay prevents restart with engine running

Protection Cover for Cylinder Rod

The bucket cylinder rod has a protective shield to prevent damage from falling rock.

Battery Master Switch

A keyed master switch disconnects battery power to protect the electrical system during down periods and to deter machine from fire or theft.

Wheel Stopper

A Wheel stop wedge is added as a standard specification to prevent machine creeping on a slope and ensure safety.

Centralized Pressure Check Port

Centralized hydraulic and transmission pressure check ports enable easy pressure checks.



SPECIFICATIONS

ENGINE(LOW EMISSIONIZED)		
Model	Cummins	C8.3-C
Net Flywheel Horsepower	hp/ps/kW	203/206/152
	rpm	2200
Max. Torque	kg-m/rpm	86/1500
Piston Displacement	l /cu.in	8.3/504
Bore × Stroke	mm × mm/in	114 × 135/4.5 × 5.3
Type		Water Cooled Direct Injection Turbocharged.
Starting System	Motor	24V-7.76kW
	Alternator	24V-50A
	Battery	2 × 12V-200A

ELECTRICAL

Voltage	24V
Battery	2 × 12V-200A
Alternator	24V-50A

TRANSMISSION

Torque converter	3-element, single-stage, single-phase
Transmission	Countershaft with 4 speeds forward and 3 speeds reverse. Electric single lever shift and speed control. A modulating function assures smooth speed and directional changes without braking. A neutral safety circuit allows starting only when the directional lever is in neutral.

	23.5 × 25 TIRE			
	1ST	2ND	3RD	4TH
FORWARD km/h/mph	6.5/4.0	11.5/7.1	22.5/14.0	35.0/21.7
REVERSE km/h/mph	6.5/4.0	11.5/7.1	22.5/14.0	-
MAX. TRACTIVE EFFORT(Kg)	18200			

AXLES & FINAL DRIVES

Front axle	fixed
Rear axle	Oscillates up or down 14°

Full floating front and rear axles include torque proportioning differential, enclosed brakes and final drives; spiral bevel gear for reduction and a planetary gear for final reduction.

BRAKES

Service brakes	Air-over hydraulic system operated by the right brake pedal, the left pedal can be used to simultaneously brake and neutralize the transmission; sealed wet disc brakes activate four wheels; dual braking system incorporated.
Parking brake	Mechanical drum type actuated on the T/M output shaft.

STEERING SYSTEM

Type	Center-point, frame articulation, hydrostatic power steering with load sensing valve
Steering angle	40° each direction
Minimum turning radius (at the center of outside tire)	5500 mm (18' 1")

HYDRAULIC SYSTEM

Pump	Tandem Gear pumps for steering and loader control.
Capacity (discharge flow) at engine 2200 RPM	
Main pump	270 l /min (71.3 GPM)
Steering pump	160 l /min (42.3 GPM)
Relief valve setting	
Main	210 kg/cm ² (2990 PSI)
Steering	175 kg/cm ² (2489 PSI)
Control valve	open center with 3 spool type pilot operated control.

Hydraulic cylinders:

Type	Double acting, piston
No. of cylinders-bore × stroke:	
Boom cylinder	2-150mm × 782mm (5' 9" × 30' 8")
Bucket cylinder	1-180mm × 509mm (7' 1" × 20' 0")
Steering cylinder	2-75 mm × 491mm (3' 0" × 19' 3")

Hydraulic cycle time (rated load in bucket)

Raise	6.1 sec
Dump	1.4 sec
Lower(empty)	3.4 sec
Total	10.9 sec

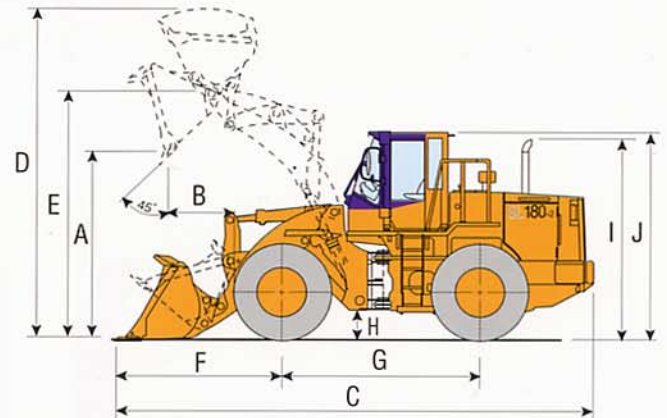
BOOM & BUCKET

Return-to-dig and height control	
Boom	Raise, hold, lower and float
Bucket	Roll-back, hold and dump.

Z-bar loader linkage designed for maximum loading capacity.
Boom and bucket pins are of sealed design for lubrication retention and dirt exclusion.
Sealed pins allow service interval.

SERVICE REFILL CAPACITIES

Hydraulic system	180 l (47.6gal)
Hydraulic tank	104 l (27.5gal)
Fuel tank	250 l (66.1gal)
Cooling system	58 l (15.3gal)
Torque converter and transmission	28 l (7.4 gal)



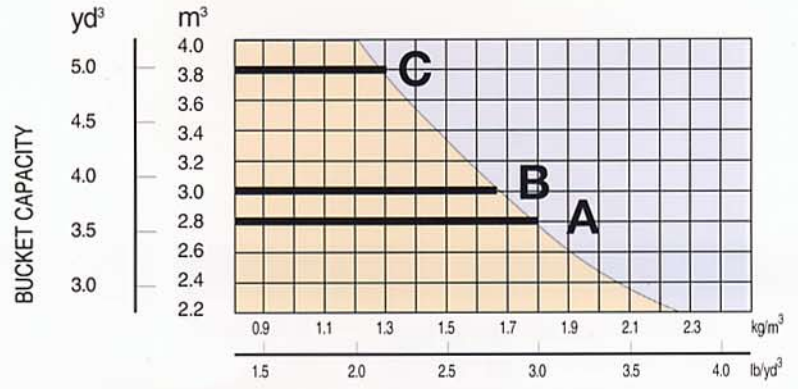
DIMENSIONS

		Unit	SL180-2
Bucket Type			General Purpose Bucket
Bucket Capacity	Heaped	m ³ (yd ³)	2.8 (3.7)
	Struck	m ³ (yd ³)	2.5 (3.3)
Bucket Width		mm(ft-in)	2800 (9' 6")
A. Dumping clearance at max. height and 45° dump angle		mm(ft-in)	2955 (9' 8")
B. Reach	at max. height and 45° dump angle	mm(ft-in)	1110 (3' 8")
	at 2130mm (7') clearance and 45° dump angle	mm(ft-in)	1650 (5' 5")
	with arm horizontal and bucket level.	mm(ft-in)	2590 (8' 6")
Digging depth (0')		mm(ft-in)	70 (2.8")
C. Overall length (Bucket on ground)		mm(ft-in)	7790 (25' 7")
D. Operating height (fully raised)		mm(ft-in)	5383 (17' 8")
Loader clearance circle (carry)		mm(ft-in)	12800 (42' 0")
Static tipping load	Straight	kg (lb)	13600 (29980)
	Full turn	kg (lb)	11800 (26010)
Breakout force		kg (lb)	16740 (36910)
Operating weight		kg (lb)	16400 (36160)
E. Bucket Pivot max. height		mm(ft-in)	3956 (13' 0")
F. Front overhang		mm(ft-in)	2693 (8' 10")
G. Wheel base		mm(ft-in)	3200 (10' 6")
H. Ground clearance		mm(ft-in)	460 (1' 6")
I. Height over exhaust		mm(ft-in)	3270 (10' 9")
J. Height over cab		mm(ft-in)	3360 (11' 0")
Noise (Cabin)		dB(A)	76

All specifications and performance values on SAE J732C and J7426 Standards.

Static tipping load and operating weight shown include the standard tires, coolant, full fuel tank, ROPS cab and operator.

BUCKET SELECTION GUIDE



MATERIAL DENSITY (× 1000)

- A - 2.8 m³ (3.7 yd³) : General purpose bucket w/ Bolt-on teeth
- B - 3.0 m³ (3.9 yd³) : General purpose bucket w/ Bolt-on cutting edge
- C - 3.8 m³ (5.0 yd³) : Light material bucket w/ Bolt-on cutting edge



SAMSUNG WHEEL LOADER SL180-2



PERFORMANCE FEATURES

- **POWERFUL CUMMINS ENGINE**

- For fuel economy and reliability

- **Z-BAR LOADER LINKAGE**

- Produces high breakout forces for faster cycles.

- **TORQUE PROPORTIONING DIFFERENTIALS**

- Minimize tire slippage, improve traction and increase tire service life.

- **40° FRAME ARTICULATION**

- Provides a shorter turning radius for excellent maneuverability in close quarters operations.

- **OPTIMUM WEIGHT TO HORSEPOWER RATIO**

- Means quick, responsive operation

- **PILOT OPERATED CONTROLS AND ERGONOMICALLY DESIGNED CAB**

- For maximum operator comfort & productivity.

- **PILLARLESS FRONT WINDOW**

- For wide scope of obstruction-free visibility.



STANDARD EQUIPMENT

Standard and optional equipment may vary. Please ask your SAMSUNG dealer for more information

- Air-conditioning
- Air cleaner, dry type
- Alternator(50-AMP)
- Automatic bucket leveler
- Automatic lift kickout
- Auto tuning radio AM/FM cassette stereo
- Back up alarm
- Batteries (two 12-Volt)
- Boom stopper
- Brake system(service, parking, secondary)
- Cab (ROPS / FOPS) Isolation Mount
- Cigarette lighter & Ashtray
- Coolers (engine oil, hydraulic oil and transmission oil)
- Counterweight
- Drawbar hitch pin
- Differential, Torque proportioning
- Engine shut-down system(key type)
- Fenders
- Floormat
- Gauge
 - Speedometer
 - Fuel level
 - Coolant temperature
 - Torque convertor oil temperature
 - Air pressure (or Battery charge)
- Heater and defroster
- Horn, Electric
- Hydraulic control (3 spool valve, joystick with option lever)
- Indicator (Warning & Monitoring lights)
 - Air restriction indicator
 - Alternator voltage
 - Engine oil pressure
 - Brake oil pressure
 - Transmission oil pressure
 - Air pressure
 - Engine coolant temperature
 - Parking brake applied
 - Transmission cut-off applied
 - Secondary steering, ready and activated (if equipped)
 - Air inlet preheating
 - Working lights
 - High beam driving lights
 - Direction indicator, hazard
- Key (single key for cab and access doors)
- Kick down switch
- Lever safety lock
- Lifting eyes
- Lights (front and rear), halogen
- Mirror(2-inside and 2-outside)
- Muffler
- Precleaner
- Rubber steering stops
- Seat (fully adjustable seat with armrest)
- Seat belt
- Sight gauge (hydraulic tank)
- Starting aid (air inlet heater or ether)
- Sunvisor
- Tires and rims
- Windshield washers/wipers (front and rear)
- Wheel stopper

OPTIONAL EQUIPMENT

- Additional counterweight
- Alternator(80-AMP)
- Buckets
- Differential (limited slip)
- Emergency steering system
- Fire extinguisher
- Fuel filler pump
- Mono-lever, loader control for 2 spool valve
- Two lever control for 2 spool valve
- Ordinary spare parts
- Purimuffler
- Ride control system
- Seat back rest extension
- Starting aid (block heater)
- Tires
- Tool kit

*Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice.
The illustrations do not necessarily show the standard version of the machine.*

VOLVO

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