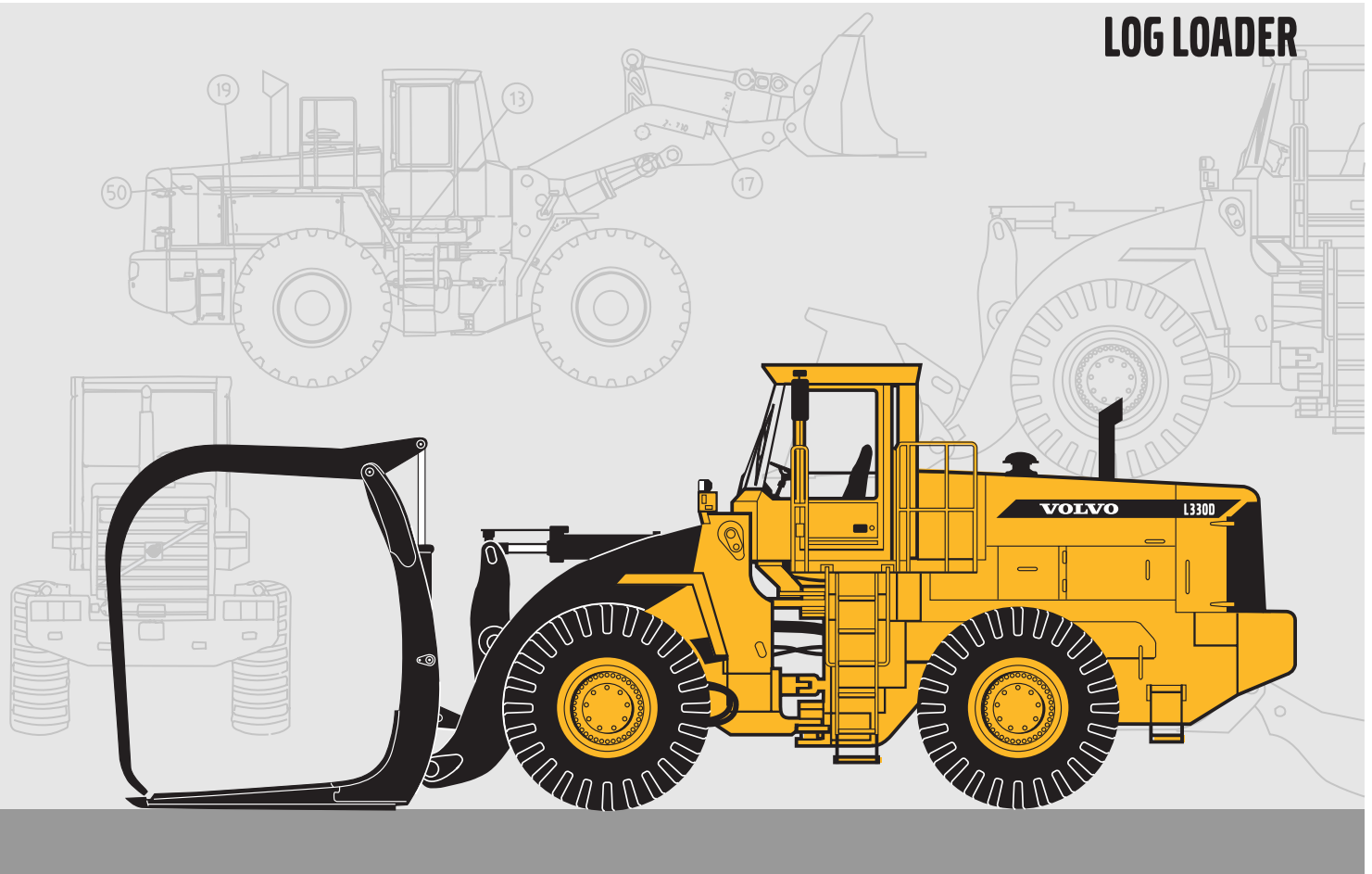


VOLVO WHEEL LOADER

L330D

LOG LOADER



- **Payload 27,2 t (60,000 lb)**
- **Engine output SAE J1995:**
gross 370 kW (503 hp)
ISO 9249, SAE J1349:
net 366 kW (498 hp)
- **Operating weight:** 59,7–60,9 t
(131,600-134,370 lb)
- **Timber grapples:** 6,0–6,6 m³
(64.6–71.0ft²)
- **Specially adapted logging linkage**
- **Volvo High Performance Low Emission engine** with excellent low rpm performance.
- **Wet disc brakes** – fully sealed, forced oil-cooled, outboard mounted.
- **Posi-Torq** limited-slip differentials in front and rear axles.
- **Care Cab II** – pressurized cab with high comfort and safety.
- **Contronic II** monitoring system
- **Load-sensing hydraulic system** – working and steering hydraulics
- **Pilot-operated working hydraulics**
- **Optional equipment**
Comfort Drive Control
Boom Suspension System
Complete protection guard package

VOLVO



SERVICE

The Contronic II monitoring system provides information on scheduled service intervals and machine condition. Minimizes time required for troubleshooting.

Service accessibility: Large, easy-to-open service doors with gas springs. Swing-out radiator grille, fan and radiator.

Refill capacities	l	US gal	Refill capacities	l	US gal
Fuel tank	693	183.1	Engine oil	61	16.1
Engine coolant	90	23.8	Transmission	92	24.3
Hydraulic tank	336	88.8	Wheel hubs, ea.	20,8	5.5
Hydraulic system	552	145.8	Differentials, ea.	68,1	18.0
			Midmount bearing	4,7	1.2



ENGINE

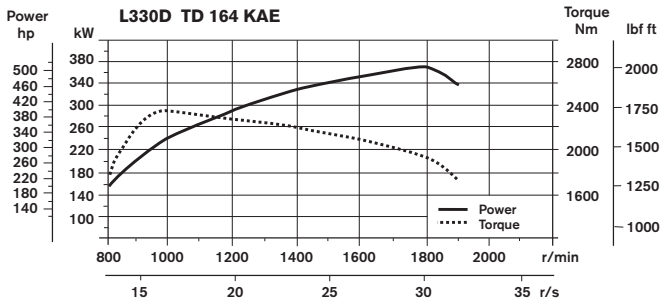
The Volvo engine offers high torque and quick response at low rpm. The machine operates efficiently at low engine speeds which contributes to good fuel economy, less noise, reduced wear and longer life.

Engine: High performance – Low emission, 4-stroke, 6-cylinder in-line diesel engine with direct injection, turbo charger and intercooler. Wet replaceable cylinder liners.

Air cleaning: three-stage

Cooling system: Hydrostatic fan with separate circuit for the intercooler.

Engine	Volvo TD 164 KAE		
Max power at	30,0	r/s	1800 rpm
SAE J1995 gross	370	kW	503 hp
ISO 9249, SAE J1349, net	366	kW	498 hp
Max. torque at	16,7	r/s	1000 rpm
SAE J1995 gross	2370	Nm	1748 lbf ft
ISO 9249, SAE J1349, net	2340	Nm	1726 lbf ft
Displacement	16,12	l	984 in ³



ELECTRICAL SYSTEM

Contronic II monitoring system with increased function control and capability to store data for analysis. Electrical system with circuit boards, well protected by fuses. The system is pre-wired for installation of optional equipment.

Central warning system: Central warning light for the following functions, (buzzer with gear engaged): Engine oil pressure, transmission oil pressure, brake pressure, parking brake applied, hydraulic oil level, axle oil temperature, steering system pressure, coolant temperature, transmission oil temperature, hydraulic oil temperature, overspeeding transmission, low brake pressure.

Voltage	24	V	
Batteries, series/parallel	4x12	V	
Battery capacity, total	240	Ah	
Cold cranking capacity	1250	A	
Reserve capacity	320	min	
Alternator rating	2240	W / 80 A	
Starter-motor output	7,5	kW	10.0 hp



DRIVETRAIN

Drivetrain and working hydraulics well-matched to achieve optimum productivity. Dependable well proven design throughout the whole drivetrain.

Torque converter: Single-stage.

Transmission: Power shift, countershaft design with single lever control. Directional and range modulation provides fast and smooth shifting.

Shifting system: Volvo Automatic Power Shift (APS II) with mode selector.

Axles: Fully floating axle shafts with planetary-type heavy duty hub reductions. Cast-steel axle housing. Fixed front axle and oscillating rear axle. Posi-Torq limited-slip differentials in front and rear axle.

Torque Converter	C9672	
Torque multiplication	2,29:1	
Transmission	8421H-19	
Speeds, max forward/reverse	km/h	mph
1 forward/reverse	6,6	4.1
2 forward/reverse	11,6	7.2
3 forward/reverse	19,9	12.4
4 forward/reverse	34,2	21.3

Measured with tires	35/65R33 XLD D1*L-4	
Front axle and rear axle	53R312	
Rear axle, oscillation	± 12 °	
Total	564 mm	22.2 in



BRAKE SYSTEM

Simple, reliable system ensures high availability and safety. Self-adjusting, forced oil-cooled, wet disc brakes give long service life.

Service brakes: Fully hydraulic operated system with outboard mounted, oil-cooled, wet disc brakes at each wheel. Filtered and cooled oil circulates through each brake when engine is running. Transmission declutch during braking can be pre-selected by a switch on the instrument panel.

Secondary brake: Dual circuit axle-by-axle system. Actuated by service brake pedal. Low pressure alarm. Dead engine braking capability provided by three nitrogen-charged accumulators.

Parking brake: Dry disc type mounted on front axle input shaft. Spring applied, electro-hydraulically released via a switch on the instrument panel. Applies automatically when the key is turned off.

Pump: Two variable-flow axial piston pumps common with the main hydraulic system.

Standards: The brake system complies with the requirements of ISO 3450, SAE J1473

Brake pressure setting	6,55 MPa	950 psi
Number of discs/wheel	6	
Number of accumulators	3	
Accumulators, volume 2x	4,0 l	2.12 US gal
1x	0,5 l	1.06 US gal



STEERING SYSTEM

Low effort steering provides fast work cycles. The power-efficient system results in good fuel economy, good directional stability and a smooth ride.

Steering system: Load-sensing hydrostatic articulated steering.

System supply: The steering system has priority feed from a load-sensing axial piston pump.

Pump: Axial piston pump with variable displacement.

Steering cylinders: Two double-acting cylinders.

Steering cylinder	2		
Bore	125 mm	4.92 in	
Piston rod diameter	70 mm	2.76 in	
Stroke	493 mm	19.4 in	
Relief pressure	26,0 MPa	3770 psi	
Max. flow	325 l/min	85.85 US gpm	
Articulation	± 35°		



CAB

Care Cab II with wide door opening and comfortable steps. Inside of cab lined with noise-absorbent materials. Noise and vibration suppressing suspension. Good all-round visibility through large glass areas. Curved front windshield of green-tinted glass. Ergonomically positioned controls and instruments permit a comfortable operating position.

Instrumentation: All important information is centrally located in the operator's field of vision. Display for Contronic II monitoring system, also centrally located.

Heater and defroster: Heater coil and air conditioner with filtered fresh air and fan with four speeds. Defroster vents for all window areas. Cab air can be recirculated.

Operator's seat: Operator's seat with adjustable suspension and retractable seatbelt. The seat is mounted on a bracket on the rear cab wall. The forces from the retractable seatbelt are absorbed by the seat rails. (Meets ISO/DIS 7096-1997).

Standard: The cab is tested and approved according to ROPS (ISO/CD 3471, SAE J1040), FOPS (ISO 3449, SAE J231). Overhead Guards (ISO 6055) and Operator Restraint system (SAE J386).

Emergency exits	2		
Sound level in cab			
according to ISO 6396, SAE J2105		LpA	75dB (A)
External sound level			
according to ISO 6395, SAE J2104		LwA	110dB (A)
(meets also EU 2006 requirements)			
Ventilation	10 m ³ /min	353	ft³/min
Heating capacity	11 kW	37,500	Btu/h
Air conditioning	8 kW	27,300	Btu/h



HYDRAULIC SYSTEM

The Load-sensing hydraulics deliver the exact amount of oil required for the function used. At the same time, complete control of the hydraulics is achieved throughout the entire lifting range. The high capacity of the pumps results in quick and smooth movements.

System supply: Two load-sensing axial piston pumps with variable displacement. The steering function always has priority from one of the pumps.

Valves: Double-acting 2-spool valve. The main valve is controlled by a 2-spool pilot valve.

Lift function: The valve has four positions; raise, hold, lower and float position. Inductive/magnetic automatic boom kickout can be switched on and off and is adjustable to any position between maximum reach and full lifting height.

Tilt function: The valve has three functions; rollback, hold and dump. Inductive/magnetic automatic tilt can be adjusted to the desired grapple angle.

Cylinders: Double-acting cylinders for all functions.

Filter: Full flow filtration through 20 micron (absolute) filter cartridge.

Relief pressure maximum,		
pump 1	24 MPa	3480 psi
Flow	340 l/min	90 US gpm
at	10 MPa	1450 psi
and engine speed	30,0 r/s	1800 rpm
Relief pressure, pump 2	26 MPa	3770 psi
Flow	250 l/min	66 US gpm
at	10 MPa	1450 psi
and engine speed	30,0 r/s	1800 rpm
Pilot system		
Relief pressure	3,5 MPA	508 psi
Cycle times	s	
Raise*	8,3	
Dump*	1,9	
Lower, empty	4,4	
Total cycle time	14,6	

* with load as per ISO 5998 and SAE J818



LIFT ARM SYSTEM

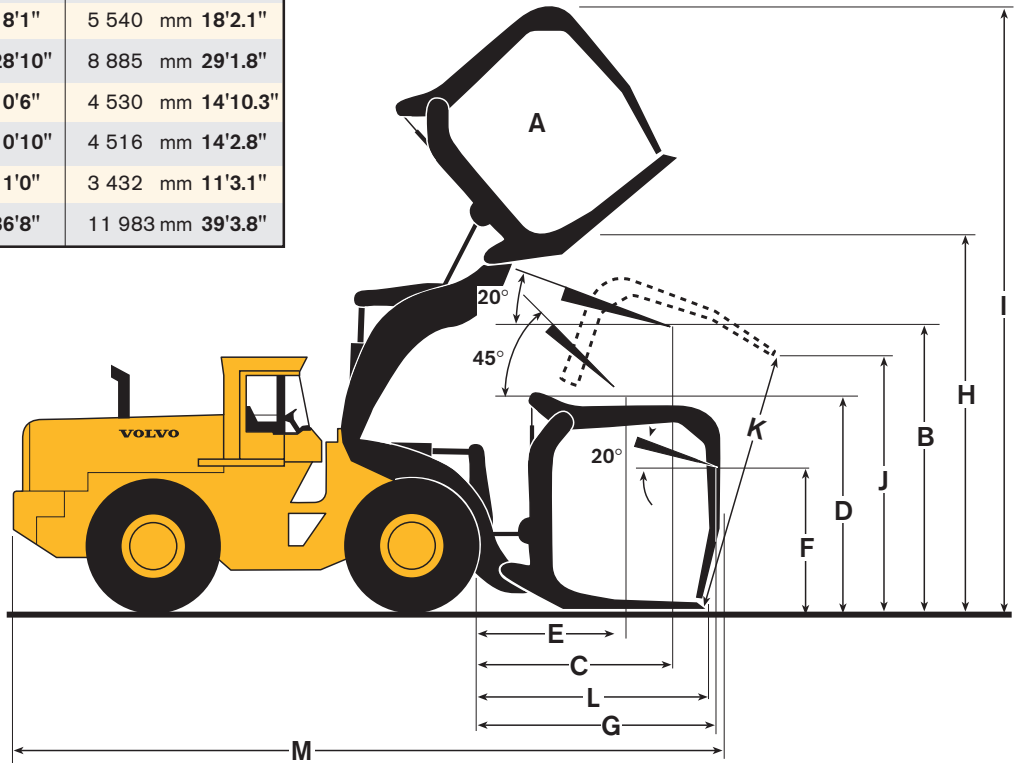
The Z-bar system is a dependable linkage with good lift and rollback qualities. Ideal for a primary production log loader.

Lift cylinder	2		
Bore	230 mm	9.1 in	
Piston rod diameter	120 mm	4.7 in	
Stroke	1170 mm	46.0 in	
Tilt cylinder	2		
Bore	170 mm	6.7 in	
Piston rod diameter	90 mm	3.5 in	
Stroke	808 mm	31.8 in	

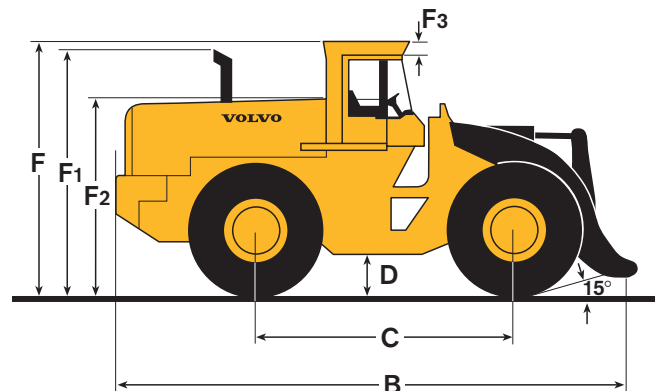
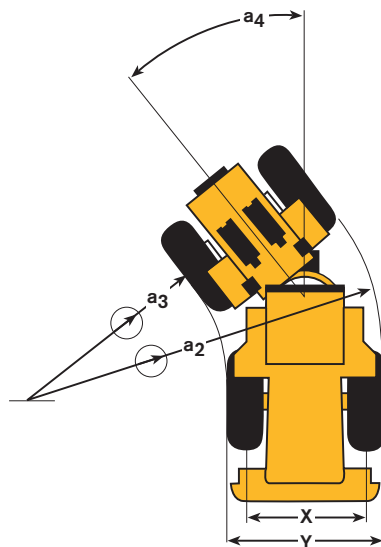
GRAPPLES SPECIFICATIONS

MEDFORD 90"	IMAC 90"	MEDFORD 96"
A 6,0 m ² 64.6 ft ²	6,1 m ² 66 ft ²	6,6 m ² 71.04 ft ²
B 3 965 mm 13'0.1"	4 266 mm 14'0"	3 901 mm 12'9.6"
C 2 962 mm 9'8.6"	3 152 mm 10'4"	3 108 mm 10'2.4"
D 3 376 mm 11'0.9"	3 279 mm 10'9"	3 274 mm 10'8.9"
E 2 751 mm 9'0.3"	2 569 mm 8'5"	2 694 mm 8'10"
F 1 520 mm 5'0"	1 821 mm 6'0"	1 456 mm 4'9.3"
G 3 849 mm 12'7.5"	4 040 mm 13'3"	3 995 mm 13'1.3"
H 5 538 mm 18'2"	5 519 mm 18'1"	5 540 mm 18'2.1"
I 8 660 mm 28'10.5"	8 791 mm 28'10"	8 885 mm 29'1.8"
J 4 410 mm 14'5.6"	3 200 mm 10'6"	4 530 mm 14'10.3"
K 4 417 mm 14'5.9"	3 300 mm 10'10"	4 516 mm 14'2.8"
L 3 275 mm 10'8.9"	3 364 mm 11'0"	3 432 mm 11'3.1"
M 11 718 mm 38'8"	11 169 mm 36'8"	11 983 mm 39'3.8"

Where applicable, specifications and dimensions are in accordance with ISO 7131, SAE J732, ISO 7546, SAE J742, ISO 5998, SAE J818, ISO 8313. Changes from the standard configuration may change machine dimensions and operating data. Operating weight is approximate and includes the grapple given in the table, ROPS canopy, cab, all standard equipment and counterweight.



B	8 715 mm	28'7"
C	4 060 mm	13'4"
D	540 mm	1'9.3"
F	4 190 mm	13'8.9"
F ¹	3 850 mm	12'7.6"
F ²	3 160 mm	10'4.4"
F ³	40 mm	0'1.6"
a ²	8 300 mm	27'3"
a ³	4 570 mm	15'0"
a ⁴	35°	
X	2 720 mm	8'11"
Y	3 630 mm	11'11.9"

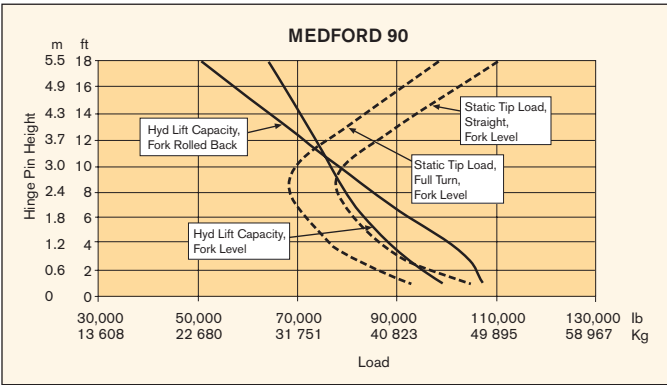


Tires: GOODYEAR 35/65 R33 (42PR) RL-5K L5

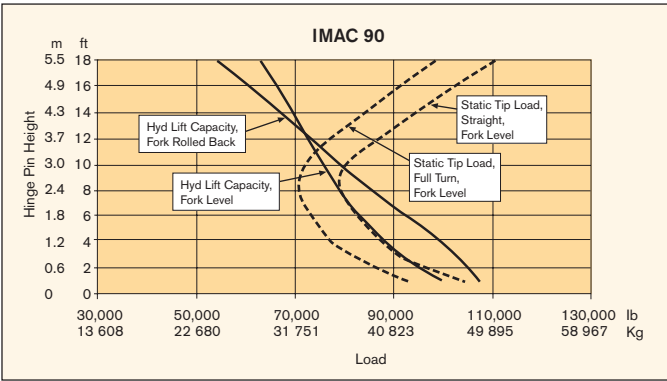
GRAPPLE SPECIFICATIONS

GRAPPLES (MUST BE ORDERED SEPARATELY, DIRECTLY FROM ALLIED VENDOR)

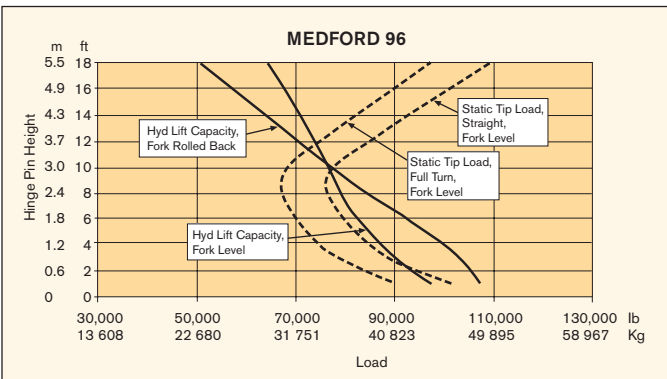
Manufacturer	Medford	IMAC	Medford
Model no	8K2273	WL 135-FHC66-DTC	8K2270
Tine length	2 290 mm 90"	2 290 mm 90"	2 440 mm 96"
Grapple weight	5 352 kg 11,801 lb	5 440 kg 11,995 lb	5 443 kg 11,995 lb
Operating weight*	60 860 kg 134,173 lb	60 951 kg 134,374 lb	60 950 kg 134,372 lb



Hinge Pin Height (ft) (m)	Static Tip Load				Hydraulic Lift Capacity			
	Full Turn Grapple Level (lb) (kg)		Straight Grapple Level (lb) (kg)		Straight/Turned Grapple Level (lb) (kg)		Straight/Turned Grapple Rolled Back (lb) (kg)	
1.03 0,313	92,588	41 990	104,420	47 356	99,201	44 989	107,236	49 492
3.28 1,000	79,032	35 842	89,455	40 569	90,787	41 164	103,205	46 805
6.56 2,000	70,851	32 132	80,412	36 468	82,280	37 315	90,390	40 993
9.84 3,000	69,852	31 679	79,279	35 954	77,193	35 008	78,472	35 588
16.79 5,118	94,577	42 892	106,407	48 257	66,456	30 139	55,088	24 983



Hinge Pin Height (ft) (m)	Static Tip Load				Hydraulic Lift Capacity			
	Full Turn Grapple Level (lb) (kg)		Straight Grapple Level (lb) (kg)		Straight/Turned Grapple Level (lb) (kg)		Straight/Turned Grapple Rolled Back (lb) (kg)	
1.03 0,313	92,257	41 840	104,233	47 271	99,337	45 051	107,236	48 640
3.28 1,000	78,650	35 669	89,201	40 454	90,506	41 046	101,836	46 184
6.56 2,000	70,470	31 959	80,152	36 350	81,486	36 955	89,486	40 583
9.84 3,000	69,471	31 506	79,016	35 835	75,936	34 438	77,616	35 200
16.79 5,118	94,244	42 741	106,217	48 171	64,807	29 391	54,935	24 914



Hinge Pin Height (ft) (m)	Static Tip Load				Hydraulic Lift Capacity			
	Full Turn Grapple Level (lb) (kg)		Straight Grapple Level (lb) (kg)		Straight/Turned Grapple Level (lb) (kg)		Straight/Turned Grapple Rolled Back (lb) (kg)	
1.03 0,313	90,312	40 958	101,908	46 217	97,538	44 235	107,236	48 714
3.28 1,000	77,248	35 033	87,488	39 677	89,556	40 615	102,305	46 397
6.56 2,000	69,384	31 444	78,743	35 711	81,439	36 934	89,940	40 789
9.84 3,000	68,370	31 007	77,649	35 215	76,838	34 847	77,572	35 180
16.79 5,118	92,259	41 841	103,856	47 100	66,851	30 318	54,863	24 881

STANDARD EQUIPMENT

Service and Maintenance

Engine oil remote drain and fill
Lubrication manifolds, ground accessible
Radiator remote drain and fill
Transmission remote drain and fill
Pressure test ports: transmission and hydraulic, quick connect, grouped on console for easy access
Fan, hydraulic driven, swing out
Grille, rear, swing out
Fuel fill strainer

Engine

Multi-cyclone air pre-cleaner with ejector, primary filter and safety filter
Coolant filter
Coolant level sight gauge
Engine intake manifold pre-heater
Exhaust rain protection
Flat-round radiator
High performance, Low emission

Electrical System

24 volt – prewired for optional equipment
Alternator, 24 Volt, 80 Amp
Back-up alarm, acoustic
Battery disconnect switch, lockable
Gauges:
• Engine temperature
• Fuel level
• Transmission temperature
Hourmeter
Horn, electric
Lights:
• Driving halogen headlights, 2 front, high and low beams
• Instrument lighting
• Parking lights
• Stop/tail combination (2 rear)
• Turn signals with hazard warning (hazard warning with separate switch)
• Working lights, 70 watt halogen (6 front and 2 rear)

Contronic II, Monitoring System, ECU with memory and analysis system

Contronic II display
Engine shut down to idle in case of:
• High engine coolant temperature
• Low engine oil pressure
• High transmission oil temperature
Neutral start feature
Brake performance test
Test function for warning and indicator lights
Warning and indicator lights:
• Alternator malfunction
• Oil pressure engine
• Oil pressure, transmission
• Brake pressure
• Parking brake applied
• Hydraulic oil level
• Hydraulic oil temp
• Brake temperature
• Primary steering pressure
• Secondary steering activated
• High beams
• Turn signals
• Rotating beacon
• Preheating coil
• Coolant temperature
• Transmission oil temperature
• Brake pressure

Drivetrain

Countershaft transmission with directional and range modulation
Single lever control
Automatic Power Shift (APS II)
Operator controlled declutch
Differentials: Posi-Torq limited-slip front and rear
Switch F/R at hyd. controls
Kickdown to 1st switch on shift lever and hydraulic console

Brake System

Brakes, full hydraulic, wet disc, continuous oil-cooled, 4 wheel dual-circuit, F/R
Parking brake, spring applied dry disc, electric/hydraulic release
Secondary brake system, accumulator supplied

Tires

35/65 R33 XLD DI* MI

Cab and ROPS Canopy

ROPS Canopy (ROPS, SAE J1040, ISO 3471) FOPS, SAE J231, ISO 3449)
Cab (ROPS, SAE J1040, ISO 3471)
Acoustical lining
Air conditioner
Ashtray
Cigarette lighter
Door lockable (left side access)
Door-open struts
Dual brake pedals
Heater/defroster/pressurizer 11 kW (37,500 Btu/h) with four speed blower fan
Filtered air for cab
Floor mat
Instrument panel with symbols
Interior light
Mirror, rearview interior (2)
Mirror, rearview, exterior (2)
Operator seat, ISRI, air suspension, heated
Safety glass, tinted
Seat belt (SAE J386) retractable
Steering wheel, telescoping, adjustable tilt
Windshield washers front/rear
Beverage holder
Adjustable hydraulic lever console
Storage compartment
Sun visor
Windshield wiper, front and rear with washer

Window sliding, door
Wiper, intermittent, front
Cab access steps, hand rails, service platforms with anti-skid surfaces (SAE J185)

Hydraulic System

Main, load-sensing valve, 2 spool, pilot-operated
Pilot valve, 3 spool
Variable displacement, axial piston pumps for:
• Working hydraulic
• Steering system
• Pilot and brake pressure
• Fan motor
Boom lever detents
Boom lowering system
Boom kickout, automatic, adjustable
Bucket lever detents
Bucket leveler, automatic, adjustable
Control lever safety latch
Steer, load-sensing valve Orbitrol, hydrostatic
Hydraulic pressure test ports, quick connect
Hydraulic fluid level sight gauge
Hydraulic oil cooler
3rd hydraulic control valve

External

Drawbar with pin
Isolation mounts: cab, engine, transmission, radiator
Lifting and tie-down lugs
Easy-to-open side panels and engine hood
Steering frame lock
Vandalism lock, provision for, batteries, engine coolant, fuel, hydraulic fluid, transmission/torque converter fluid, engine side panels
Boom to bucket pins with dual double-tapered pre-loader roller bearings
Fenders, front
Mudflaps

OPTIONAL EQUIPMENT

Service and Maintenance

Tool box, lockable
Automatic lubrication system

Engine Equipment

Engine block heater, 120 V (US)
Engine block heater, 240 V 2500W (US)
Engine block heater, 220 V 1500W (Europe)
Air pre-cleaner, oil bath type

Electrical System

Rotating beacon
Working lights rear, extra
Battery for extreme cold weather

Tires and Rims

35/65R33 RL-5K* L5 GY
33.25 R35 RL-3J** E3 GY
Wood protected rims

Cab

Armrest (left) for ISRI operator seat
Steering knob
Radio installation kit, incl. power outlet 12 V
3" retractable seatbelt, extended length
Ventilation filter for asbestos environment
Lunch box holder
Noise reduction kit
Radio with tape deck
Sliding window right side
Throttle, lockable

Hydraulic System

Attachment locking, without bracket
Biodegradable hydraulic fluid
Hydraulic function, 4rd
Artic kit

External Equipment

Counterweight
Fenders, rear swing-out

Protective Equipment

Guards for stop/tail lights
Guards for std. working light rear
Guards for headlights front
Windshield guard
Window guards, side and rear window
Protection plates under cab

Belly guards front and rear
Hose protection for boom cyl.hoses
Radiator sand grid

Other Equipment

Comfort Drive Control, CDC
Secondary steering
Boom Suspension System

Under our policy of continuous product 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

Volvo Construction Equipment Group

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