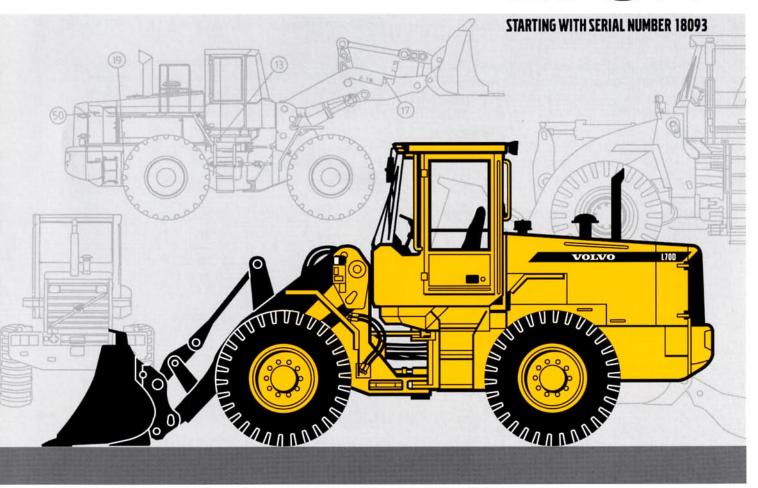
VOLVO WHEEL LOADER



- Engine output SAE J1995: gross 96 kW (130 hp) ISO 9249, SAE J1349: net 91 kW (124 hp)
- Operating weight: 10,9-12,2 t 24,000-26,900 lb
- Bucket volume: 1,6-5,0 m³
 2.1-6.5 yd³
- Volvo high-performance, lowemission engine
 - Excellent low rpm performance
 - Meets all known exhaust emission regulations for offroad vehicles

- · Volvo transmission with APS II · Contronic II monitoring
- 2nd generation Automatic Power Shift with mode selector
- Optimizes performance
- · Wet disc brakes
 - Fully sealed, oil-circulation cooled, outboard mounted
- Torque Parallel Linkage
 - High breakout torque throughout the working range
 - Excellent parallel lift-arm action
- Care Cab II
 - Pressurized cab with high comfort and safety

- Contronic II monitoring system
- Load-sensing working hydraulics and steering system
- Pilot-operated working hydraulics

Optional equipment

- Power take-off for hydraulically powered attachments
- Hydraulic attachment bracket
- · Boom Suspension System
- Comfort Drive Control

Other options, see back page





SERVICE

The Contronic II monitoring system provides information on machine condition, routine maintenance schedules and minimizes time required for troubleshooting.

Service accessibility: Large, easy-to-open engine access doors with gas struts. Swing-out radiator grille and radiator.

Refill capacities	1	US gal	Refill capacities	1	US gal
Fuel tank	190	50.2	Gearbox	17	4.5
Engine coolant	40	10.6	Engine oil	16	4.2
Hydraulic tank	65	17.2	Axle front / rear	24/24	6.3/6.3



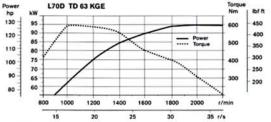
ENGINE

The engine offers high torque and quick response at low rpm also under full load. The machine operates at low engine speeds, which contributes to good fuel economy, less noise, less wear and longer life.

Engine: High performance, low emission 6-cylinder, in-line, direct-injected, turbocharged, intercooled 4-stroke diesel engine with wet replaceable cylinder liners.

Air cleaning: three-stage.

Engine Volvo TD 63 KGE		
Max power at	35 r/s	2 100 r/min
SAE J1995 gross	96 kW	130 hp
ISO 9249, SAE J1349 net	91 kW	124 hp
With optional noise reduction		
kit EU2002	93 kW	126 hp
Rated power at	36,6 r/s	2 200 r/min
SAE J1995 gross	94 kW	128 hp
ISO 9249, SAE J1349 net	89 kW	122 hp
With optional Noise reduction		17
kit EU 2002	92 kW	125hp
Max. torque at	18,3 r/s	1 100 r/min
SAE J1995 gross	595 Nm	439 lbf ft
ISO 9249, SAE J1349 net	590 Nm	435 lbf ft
Displacement	5.48	334 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 temperature, brake pressure, parking brake applied, steering system pressure, coolant temperature, transmission oil temperature, hydraulic oil temperature, overspeeding in engaged gear, computer malfunction.

Voltage	24 V
Batteries	2x12 V
Battery capacity	2x105 Ah
Cold cranking capacity, ea	690 A
Reserve capacity, ea	185 min
Alternator rating	1 680 W / 60 A
Starter-motor output	5,4 kW 7.3 hp



DRIVETRAIN

The drivetrain and working hydraulics are well-matched to each other and of reliable design. Quick acceleration boosts productivity. Volvo system-compatible design facilitates servicing.

Torque converter: Single-stage

Transmission: Volvo Countershaft-type transmission with single-lever control. Fast and smooth directional and speed shifting.

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

Axles: Volvo axles, fully floating with shafts and planetary-type hub reductions. Cast-steel axle housing. Fixed front axle and oscillating rear axle. 100% differential lock on front axle.

Transmission	Volvo	HT 90		
Torque multiplication	2,85:	1		
Speeds, max. forward/reverse.	High r	range	Low ra	ange (Opt.)
	km/h	mph	km/h	mph
1	7,0	4.3	1,9	1.2
2	14,0	8.7	3,7	2.3
3	26,0	16.2	7,3	4.5
4	44,0	27.3	13,6	8.5
Measured with tires	20.5 F	R25* L2	2	
Front axle	Volvo	/ AWB	15	
Oscillation, rear axle	±13°			
Ground clearance at				
13° oscillation	420 n	nm	16.5 i	n



BRAKE SYSTEM

A simple and reliable brake system that ensures high availability and safety. Self-adjusting oil circulation-cooled wet disc brakes give long service intervals.

Service brakes: Volvo, dual-circuit system with nitrogencharged accumulators. Fully hydraulically operated, enclosed, internal oil-circulation cooled disc brakes. Transmission declutch during braking can be preselected by a switch on the instrument panel. Brake performance test included in the Contronic II system.

Parking brake: Mechanically operated drum brake on front axle input shaft. Electro-hydraulically operated (option).

Secondary brake: Either the service brake circuits or the parking brake fullfills the safety requirements.

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

Number of discs/wheel	1	
Number of accumulators	3	
Volume, each	0.51	30.5 in ³

OPERATIONAL DATA, VOLVO L70D**

				GENERAL	PURPOSE			GRADING	LIG	HT MATER	IAL
Tires 20.5 R25		Bolt-on edge	Bolt-on edge	Bolt-on edge	Teeth	Teeth	Teeth	62	Bolt-on edge	Bolt-on edge	Bolt-on edge
Volume, heaped ISO/SAE	m ³	1,9	1,9	1,7	1,6	1,8	1,8	1,6	3,1	3,1	5,0
	yd ³	2.5	2.5	2.2	2.1	2.4	2.4	2.1	4.1	4.1	6.5
Volume at 110% fill factor	m ³ vd ³	2,1	2,1	1,9 2.5	1,8	2,0	2,0	-	3,4	3,4 4.5	5,5 7.2
Static tipping load,	kg	8 730	8 260	8 820	8 510	8 890	8 390	7 360	8 270	7 820	7 810
straight	Ib	19,250	18,210	19,440	18,760	19,600	18,500	16,230	18,230	17,240	17,220
at 35° turn	kg	7 810	7 370	7 900	7 600	7 970	7 490	6 570	7 370	6 950	6 900
	Ib	17,220	16,250	17,420	16,760	17,570	16,510	14,480	16,250	15,320	15,210
at full turn	kg	7 540	7 100	7 630	7 330	7 690	7 230	6 330	7 110	6 690	6 640
	Ib	16,620	15,650	16,820	16,160	16,950	15,940	13,960	15,670	14,750	14,640
Breakout force	kN	86,9	79,4	92,5	88,8	91,9	83,6	61,6	65,7	61,1	53,2
	Ibf	1 9,540	1 7,850	20,800	19,960	20,660	18,790	13,850	14,770	13,740	11,960
A	mm	7 120	7 220	7 050	7 270	7 240	7 340	7 460	7 480	7 570	7 790
	ft in	23'4"	23'8"	23'1 "	23'10"	23'9 "	24'1 "	24'6"	24'6 "	24'10 "	25'7 "
E	mm	990	1 090	920	1 140	1 110	1 200	1 300	1 340	1 430	1 650
	ft in	3'3"	3'7"	3'0"	3'9"	3'8 "	3'11"	4'3"	4'4"	4'8 "	5'5 "
H *)	mm	2 880	2 820	2 930	2 790	2 810	2 740	2 580	2 650	2 590	2 440
	ft in	9'6"	9'3"	9'7 "	9'2"	9'3"	9'0"	8'6"	8'8"	8'6"	8'0 "
L	mm	5 060	5 120	5 000	5 060	5 070	5 120	4 540	5 220	5 290	5 490
	ft in	16'7 "	16'10"	16'5 "	16'7 "	16'7 "	16'10"	14'11"	1 7'2 "	17'4"	18'0 "
M *)	mm	960	1 030	910	1 080	1 050	1 130	1 080	1 230	1 310	1 500
	ft in	3'2"	3'5"	3'0 "	3'7"	3'6"	3'9"	3'6"	4'0"	4'4"	4'11"
N *)	mm	1 540	1 580	1 520	1 610	1 590	1 630	1 490	1 580	1 620	1 670
	ft in	5'1 "	5'2"	5'0 "	5'3"	5'3 "	5'4 "	4'11"	5'2 "	5'4 "	5'6 "
V	mm	2 500	2 500	2 500	2 500	2 500	2 500	2 500	2 550	2 550	2 650
	ft in	8'2"	8'2"	8'2"	8'2"	8'2"	8'2"	8'2"	8'4"	8'4"	8'8"
a, clearance circle	mm	11 130	11 170	11 100	11 200	11 190	11 240	11 510	11 370	11 410	11 640
	ft in	36'6"	36'8"	36'5"	36'9"	36'9 "	36'10"	37'9"	37'4 "	37'5 "	38'2"
Operating weight	kg	11 330	11 570	11 290	11 470	11 270	11 530	11 450	11 510	11 750	12 040
	Ib	24,980	25,510	24,890	25,290	24,850	25,420	25,240	25,380	25,900	26,540

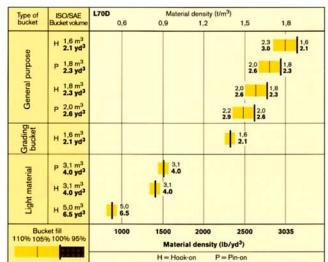
^{*)} at 45° dump angle

BUCKET SELECTION CHART

The choice of bucket is determined by the density of the material and the expected bucket fill factor. The actual bucket volume is often larger than the rated capacity, due to the TP linkage features: • Open bucket design. • Very good roll back in positions. • Good bucket fill performance. Example: Sand and gravel. Fill factor ~ 105%. Density 2865 lb/yd³. Result: The 2.3 yd³ bucket carries 2.4 yd³. For optimum stability, always consult the bucket selection chart.

		Materi	al density	ISO/ buck	SAE et volume	Actua	
Material	Bucket fill %	t/m ³	lb/yd³	m^3	yd³	m ³	yd³
Earth/Clay	~ 110	~ 1,8	~ 3035	1,6	2.1	~ 1,8	~ 2.3
		~ 1,6	~ 2695	1,8	2.3	~ 2,0	~ 2.6
		~ 1,4	~ 2360	2,0	2.6	~ 2,2	~ 2.9
Sand/Grave	l ~ 105	~ 1,9	~ 3200	1,6	2.1	~ 1,7	~ 2.2
		~ 1,7	~ 2865	1,8	2.3	~ 1,9	~ 2.5
		~ 1,5	~ 2530	2,0	2.6	~ 2,1	~ 2.7
Aggregate	~ 100	~ 1,9	~ 3200	1,6	2.1	~ 1,6	~ 2.1
		~ 1,7	~ 2865	1,8	2.3	~ 1,8	~ 2.3
		~ 1,6	~ 2695	2,0	2.6	~ 2,0	~ 2.6
Rock	≤ 100 🥎	~ 1,7	~ 2865	1,6	2.1	~ 1,6	~ 2.1

The size of rock buckets is designed for optimal penetration and filling capability rather than the density of the material.



SUPPLEMENTAL OPERATING DATA

No additional counterweight available				Add				
			17.5 R25* L2		17.5-25* L3		extended fenders	
Width over tires	mm	in	-90	3.5	+60	2.4	=	-
Ground clearance	mm	in	-60	2.4	+25	1.0	-	-
Operating weight	kg	lb	-330	730	+160	355	+200	440
Tipping load, full turn	kg	lb	-190	420	+80	175	+245	540

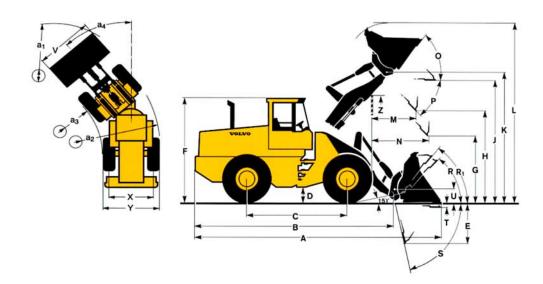
^{**)} attachment data applies only to original Volvo attachments

OPERATIONAL DATA & DIMENSIONS

Tires: 20.5 R25* L2

В	3 920 mm	12'10"
С	2 840 mm	9'4"
D	430 mm	1'5"
F	3 210 mm	10'6"
G	2 135 mm	7'0"
J	3 590 mm	11'9"
K	3 880 mm	12'9"
0	56"	
P	45*	
R	44*	
R,*	48*	
S	78°	
T	50 mm	0'2"
U	440 mm	1'5"
Χ	1 860 mm	6'1"
Υ	2 390 mm	7'10"
Z	3 170 mm	10'5"
	5 100 mm	
a ₃	2 710 mm	8'11"
a,	±40°	

Where applicable, specifications and dimensions are in accordance with ISO 7131, SAE J732, ISO 7546, SAE J742, ISO 5998, SAE J818, and ISO 8313.



^{*} Carry position SAE

MATERIAL HANDLING ARM (Hook on)

Tires: 20.5 R25* L2

		777 C
Α	1 620 kg	3572 lb
В	1 280 kg	2822 lb
C	1 050 kg	2315 lb
D	2 510 mm	8'3"
E	1 940 mm	6'4"
F	1 410 mm	4'8"
G	3 260 mm	10'8"
Н	4 300 mm	14'1"
1	5 430 mm	17'10"
J	1 020 mm	3'4"
K	1 370 mm	4'6"
L	1 760 mm	5'9"
М	2 190 mm	7'2"
N	3 170 mm	10'5"
0	4 230 mm	13'11"
Р	1 500 mm	4'11"
Q	5 320 mm	17'5"
R	6 210 mm	20'4"

Max rollback Order No: 92007 position Operating weight: 11 200 kg (24,700 lb) R Max dump

position

PALLET FORK (Hook on)

Tires: 20.5 R25* L2

A	840 mm	2'9"
В	1 560 mm	5'1"
C	80 mm	0'3"
D	1 830 mm	6'0"
E	3 730 mm	12'3"
F	670 mm	2'2"

S 7 190 mm 23'7"

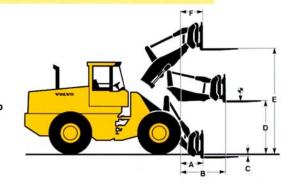
93525/93526 Fork tine order no. (R/L): 1 200 mm 3'11" Length:

Fork frame order no: 80041

Width: 1 500 mm 4'11" 4 290 kg 9,460 lb Rated operating load*: at load center distance: 600 mm 2'0" Operating weight: 11 250 kg 24,800 lb

Incl. optional counterweight

^{*} acc. std EN 474-3, firm and level ground





STEERING SYSTEM

Low effort steering provides fast work cycle times. Powerefficient system provides good fuel economy, good directional stability and 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: Double variable-flow axial piston pump.

Cylinders: Two double-acting cylinders.

Steering cylinders	2	
Bore		2.48 in
Piston rod diameter	40 mm	1.57 in
Stroke	370 mm	14.57 in
Relief pressure	21 MPa	3046 psi
Max. flow	80 I/min	21.13 US gpm
Articulation	±40°	50



CAB

Care Cab II with easy entry and wide door opening. Inside of cab lined with noise-absorbent materials. Sound 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. Center console display for Contronic II monitoring system.

Heater and defroster: Heating element with filtered fresh air and fan with four speeds. Defroster vents for all window areas.

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: Tested and approved according to the following standards: ROPS (ISO/CD 3471, SAE J1040), FOPS (ISO 3449, SAE J231). Complies with "Overhead guards for rider lift trucks" (ISO 6055) and "Operator Restrain System" (SAE J386).

Emergency exits	2		
Sound level in cab ISO 6396	71 dB (A)		
External sound level			
According to ISO 6395	LwA 106 dB (A)		
According to EU 2002 requirements	LwA 104 dB (A)		
According to Blue Angel			
Ventilation	9 m ³ /min	318 ft3/min	
Heating capacity	11 kW	37,500 Btu/h	
Air conditioning (optional)	8 kW	27,300 Btu/h	



HYDRAULIC SYSTEM

The Load-Sensing hydraulic system delivers 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: One load-sensing double axial piston pump with variable displacement. The steering function always has priority.

Valves: Double-acting 2-spool valve. The main valve is contolled 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 bucket positioner, can be switched on and off.

Cylinders: Double-acting cylinders for all functions.

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

Axial piston pump		
Relief pressure	26,0 MPa	3771 psi
Flow	160 l/min	42.3 US gpm
at	10 MPa	1450 psi
and engine speed	36,7 r/s	2 200 rpm
Pilot system		
Relief pressure	3,0 MPa	435 psi
Cycle times		
Raise*	5,4 s	
Dump*		
Lower, empty	3,0 s	
Total cycle time	9,5 s	

^{*} with load as per ISO 5998 and SAE J818



LIFT-ARM SYSTEM

The TP Linkage combines high breakout torque throughout the working range with parallel lift-arm action. These features together with high lift height and long reach make the lift-arm system equally as good in bucket loading as in work with fork attachments and material handling arms.

Lift cylinder	2	
Bore	100 mm	3.9 in
Piston rod diameter	70 mm	2.8 in
Stroke	734 mm	28.9 in
Tilt cylinder	1	
Bore	150 mm	5.9 in
Piston rod diameter	80 mm	3.1 in
Stroke	440 mm	17.3 in

STANDARD EQUIPMENT

Engine

High performance, low emission Volvo TD 63 KDE Dual fuel filters Cold starting aid
Air cleaner, dry type, dual element,
exhaust-aspirated precleaner Coolant level, sight gauge Muffler, spark arresting Coolant filter Fan guard Primary fuel filter with water separator

Electrical System

24 V - prewired for optional accessories Alternator, 24 V, 60 A Battery disconnect switch Gauges:

- Fuel gauge
- Engine coolant temperature gauge
 Transmission oil temperature
- gauge Hourmeter

Horn, electric

Instrument panel with symbols Lights:

- Driving (2-front), halogen head lights with high/low beam
- Parking lights
- Stop/tail combination (2 rear)
- Turn signals with separate hazard warning switch
- Halogen working lights (2 front/2 rear)
- Instrument lighting
- Reverse alarm (SAE J994)

Contronic II Monitoring System, ECU with log and analysis system

Contronic II display Engine shutdown to idle

- High engine coolant temperature
 Low engine oil pressure
- High transmission oil temperature Neutral start feature Brake performance test function

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 temperature
- · Axle oil temperature
- Primary steering
- · High beams
- Turn signals
- Rotating beacon
- Preheating coil
 Differential lock (front axle)
- Coolant temperature
 Transmission oil temperature
- Brake charging
 Air cleaner restriction
- · Hydraulic oil level
- · High speed/gear
- Overspeed engine

Drivetrain

Transmission: modulated with single lever control, Automatic Power Shift (APS II) with mode selector and operator-controlled declutch Forward and reverse switch on

hydraulic control console Tires 17.5R25 L2 100% differential lock, front axle

Brake System

Wet, internal oil-circulation cooled, outboard-mounted disc brakes, 4-wheel, dual circuit brake system Secondary brake system, accumulator supplied Parking brake

ROPS (SAE J1040) (ISO 3471), FOPS (SAE J231) (ISO 3449).

Acoustical lining

Ashtray

Cigarette lighter

Cab access steps and handrails Dual service brake pedals

Door lockable (left side) Heater/defroster/pressurizer

with four speed blower fan Filtered air

Floor mat

Dome light

2 interior rearview mirrors

2 exterior rearview mirrors

Openable window, right-hand side Steering wheel, adjustable tilt and telescopic, adjustable lever console

Tinted safety glass Retractable seat belt (SAE J386) Ergonomically designed operator's

seat with adjustable suspension Storage compartment Sun visor Beverage holder Windshield wiper, front and rear Intermittent wiper, front Windshield washer, front and rear

Hydraulic System

Main valve, 2-spool, pilot-operated Pilot valve, 2-spool Boom-lowering, stopped engine Dual axial piston pump Bucket lever detent

Hydraulic control lever safety latch Hydraulic pressure test ports, quick connect

Hydraulic fluid level, sight gauge Hydraulic oil cooler

Bucket leveler, automatic with position indicator, adjustable Boom lever detents

Boom kickout, automatic, adjustable Hydraulic pressure test port, quick connect

External Equipment

Attachment bracket, hydraulic, with separate locking system Isolation mounts: cab, engine, transmission, radiator

Lifting and tie-down lugs Side panels, engine hood Steering frame lock Vandalism lock, provison for:

batteries, engine oil Drawbar hitch Fenders front/rear Fuel fill strainer

OPTIONAL EQUIPMENT (Standard in certain markets)

Service and Maintenance

Tool box Automatic lube system

Coolant pre-heater (120 V/750 W) or (240 V/750 W) Pre-cleaner, oil bath type Pre-cleaner, turbo type

Electrical System

Alternator 100 A Working lights front, extra Working lights rear, extra Rotating beacon, amber with collapsible mount

Drivetrain

Transmission, 8-speed Limited slip differential, rear Limited slip differential, front and

Installation kit for radio AM/FM radio with tape deck

Heated operator seat Armrest, left side Seat belt, 3 in, extended length Sliding window, right side Hand throttle Air suspended operator's seat Air conditioner Noise reduction kit, cab Parking brake alarm Open ROPS version Sunblinds Ventilation filter for asbestos environment

Hydraulic System

Hydraulic control, 3rd function Hydraulic control, 4th function Hydraulic controls, 5th/6th function Hydraulic power take off, heavy duty Hydraulic single-acting lifting

function Boom Suspension System Biodegradeable hydraulic fluid Lever detent 3rd function Artic kit Single lever control

External Equipment

Fenders, axle-mounted rear Fender wideners

Other Equipment

Comfort Drive Control (CDC) Slow moving vehicle sign Secondary steering
Electro-hydraulically operated parking brake

Tires

20.5-25, 20.5R25*, 555/70 R25

Protective Equipment

- Guards for: Headlights
- Rear working lights
 Rear lights
- Windshield
- · Air cleaner restriction Cover plate under cab Belly guards, front and rear

Attachments

Buckets:

- Straight with/without teeth
 Spade nose with/without teeth
- · High tip

Broom

· Light material

Three piece, reversible bolt-on cutting edge Bolt-on and weld-on bucket teeth Log grapples Fork equipment Material handling arm

Diagonal snow blade

Attachment rib kit

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.



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