Engine output SAE J1349:
Net 213 kW 285 hp
Gross 216 kW 289 hp
Body volume: 16.5 m³ 21.6 yd³
Load capacity: 27 t 30 sh ton

- Engine output SAE J1349: Net 213 kW 285 hp Gross 216 kW 289 hp
- Body volume: 16.5 m³ 21.6 yd³
- Load capacity: 27 t 30 sh ton

- Volvo High-performance, low-emission direct-injected, intercooled, turbocharged engine as standard.
- Electronically controlled, fully automatic powershift transmission.
- Variable hydraulic retarder as standard.
- 100% lock-up diff. locks. One longitudinal and three transverse diff. locks.
- Volvo rough terrain suspension, high ground clearance and individually oscillating bogie and front axle.
- Low interior noise level.
- Adjustable steering wheel.
**ENGINE**


Fan: Hydrostatic-driven, thermostatically controlled radiator fan, consuming power only when needed.

Make: Volvo Model: TD103 KBE
Max power at: 36.7 r/s 2200 rpm
SAE J1349 Gross: 216 kW 289 hp
Flywheel power at: 36.7 r/s 2200 rpm
SAE J1349 Net: 213 kW 285 hp
DIN 6271*: 213 kW 285 hp
Max torque at: 16.6 r/s 996 rpm
SAE J1349 Gross: 1365 Nm 1007 lbf ft
SAE J1349 Net: 1360 Nm 1003 lbf ft
DIN 6271**: 1360 Nm 1003 lbf ft
Displacement total: 9.6 l 586 in*
Bore: 120 mm 4.7 in
Stroke: 140 mm 5.5 in
Compression ratio: 18:1

* with fan at normal speed. With fan operating at full speed the flywheel power is 199 kW 267 hp, which corresponds to DIN 70020.
** with fan at normal speed. With fan operating at full speed the maximum torque is 1190 Nm, 878 lbf ft, which corresponds to DIN 70020

**DRIVETRAIN**

Torque converter: Single stage with free-wheeling stator and automatic lock-up in all ranges.
Transmission: Electronically controlled, fully automatic planetary transmission with six gears forward and two in reverse.
Drop box: Volvo single-stage, power takeoff and 100% differential locking.
Axles: Volvo. 6-wheel drive. All axles have transversal diff. locks with 100% locking capability and fully floating axle shafts with planetary type hub reductions.

Differential locks: One longitudinal and three transverse. All with 100% locking capability.

Torque converter: 2.42:1
Transmission: Volvo PT 1663
Dropbox: Volvo FL 650B
Axles: Volvo AH 63

**ELECTRICAL SYSTEM**

Voltage: 24 V
Battery capacity: 2x1 70 Ah
Alternator: 1.68 kW 60 A
Starter motor: 6.6 kW 8.8 hp

**SERVICE CAPACITIES**

Crankcase: 23 l 6.1 US gal
Fuel tank: 360 l 95.1 US gal
Cooling system: 52 l 13.7 US gal
Transmission total: 41 l 10.8 US gal
Dropbox: 6 l 1.6 US gal
Front axle: 27 l 7.1 US gal
First bogie axle: 28 l 7.4 US gal
Second bogie axle: 27 l 7.1 US gal
Brake hydraulics: 2 l 0.5 US gal
Hydraulic system: 194 l 51.3 US gal
Hydraulic tank: 175 l 46.2 US gal

**SUSPENSION**

Volvo suspension system
Front axle: One rubber spring with bottoming absorption on each side. Stabilizer. Two shock absorbers on each side. The front axle is suspended at three points, allowing oscillation in rough terrain.
Bogie: Volvo's unique rough terrain bogie, which permits individual oscillation between the axles.

Speeds with tires 30/65 R 25 and 23.5 R 25

<table>
<thead>
<tr>
<th>Speeds</th>
<th>Forward</th>
<th>Reverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8.2 km/h 5.1 mph</td>
<td>7.6 km/h 4.7 mph</td>
</tr>
<tr>
<td>2</td>
<td>11.9 km/h 7.4 mph</td>
<td>13,1 km/h 8.1 mph</td>
</tr>
<tr>
<td>3</td>
<td>21.5 km/h 13.4 mph</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>31.1 km/h 19.3 mph</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>39.5 km/h 24.5 mph</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>52.3 km/h 32.7 mph</td>
<td></td>
</tr>
</tbody>
</table>
**BRAKE SYSTEM**

Air-hydraulic disc brakes on all axles. Two circuits. Designed to comply with ISO 3450 and SAE J1473 at gross machine weight.

Circuit division: One for front axle and one for bogie axles.

Parking brake: Spring-applied, air-released disc brake on the propeller shaft, designed to hold a loaded machine on a grade up to 18%. When the parking brake is applied, the longitudinal differential is locked.

Compressor: Gear-driven by engine transmission.

Exhaust retarder: Standard.

For retarding capability, including hydraulic transmission retarder, engine and exhaust retarder, see graph on page 4.

**HYDRAULIC SYSTEM**

Pumps: Four engine-dependent, variable piston pumps mounted on flywheel power takeoffs. One ground-dependent hydraulic pump for supplementary steering mounted on drop box.

Filter: Filtration of oil through two paper filters with magnetic cores.

Pump capacity per pump at shaft speed ........ 36 r/s 2160 rpm

109 l/min 28.8 US gal/min

Working pressure ....... 19 MPa 2758 psi

**STEERING SYSTEM**

Hydromechanical articulated steering. 3,4 turns lock-to-lock.

Cylinders: Two double-acting steering cylinders.

Supplementary steering: Standard. Complies with the ISO 5010 standard at total machine weight.

Steering angle: ±45°

**BODY**

Body: Hardened and tempered steel body with high-impact strength.

Cylinders: Two single-stage, double-acting hoist cylinders.

Tipping angle .............. 70°

Tipping time with load ....... 14 s

Lowering time .............. 13 s

Body, plate thickness

Front 8 mm 5/16 in

Side 12 mm 1/2 in

Bottom/chute 14 mm 9/16 in

Yield strength .......... 1000 N/mm² 145,000 psi

Tensile strength .......... 1250 N/mm² 181,000 psi

Hardness min. .......... 360–440 HB

**WEIGHTS**

Operating weight includes all fluids and operator.

Operating weight with tires 23.5 R 25

Front 11500 kg 25,350 lb

Rear 9400 kg 20,720 lb

Total 20900 kg 46,080 lb

Payload ............... 27000 kg 59,520 lb

Total weight............. 47900 kg 105,600 lb

A30C equipped with 30/65 R 25 tires, add 200 kg 440 lb per axle.

**GROUND PRESSURE**

At 15% sinkage of unloaded radius and specified weights.

With tires: 23.5 R 25 30/65 R 25

Unloaded

Front 112 kPa 16.2 psi 94 kPa 13.6 psi

Rear 48 kPa 6.7 psi 40 kPa 5.8 psi

Loaded

Front 150 kPa 21.7 psi 124 kPa 18.0 psi

Rear 164 kPa 23.8 psi 135 kPa 19.6 psi

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Volvo cab, tested and approved according to ROPS standard ISO 3471 and SAE J1040/4PR 88, FOPS standard ISO 3449 and SAE J231. Mounted on rubber pads which effectively reduce vibrations. Adjustable steering wheel.

Radio/Contronic console in ceiling.

Heater and defroster: Filtered air and pressurized cab. Three-speed fan.

Operator's seat: Ergonomically designed adjustable seat with air suspension, electric heating and flameproof upholstery.

Trainer's seat: Standard.

Number of exits ............. 2

Internal sound level acc. to ISO 6394 at max. speed ... 76 dB (A)
DIMENSIONS Volvo A30C 6x6 (unloaded)

A 10200 mm 33'6"
A1 4862 mm 15'11"
A2 5856 mm 19'3"
B 5187 mm 16'11"
C 3410 mm 11'2"
C1 3260 mm 10'8"
C2 1331 mm 4'4"
D 2770 mm 9'1"
E 1210 mm 4'

C* 3802 mm 12'6"
with optional spill guard in upright position

F 4173 mm 13'8"
G 1670 mm 5'6"
H 1587 mm 5'2"
I 430 mm 1'6"
J 2834 mm 9'4"
K 2180 mm 7'2"
L 594 mm 1'11"
M 6494 mm 21'4"
N 8047 mm 26'6"
N1 4021 mm 13'2"

O 2932 mm 9'7"
P 2720 mm 8'11"
Q 2286 mm 7'6"
R 530 mm 1'9"
R1 567 mm 1'10"
S 1484 mm 4'10"
T 810 mm 2'8"
U 3305 mm 10'10"
V 2216 mm 7'3"

W 2820 mm 9'3"
W* 2980 mm 9'9"
X 465 mm 1'7"
X1 522 mm 1'8"
X2 670 mm 2'2"
Y 2216 mm 7'3"
Z 2820 mm 9'3"
Z* 2980 mm 9'9"

a1 23°
a2 70°
a3 46°

* with tires 30/65 R 26

LOAD CAPACITY (Body volume according to SAE 2:1)

US body load capacity ........ 27000 kg 30 sh tn
Body, struck .................. 12,9 m³ 16.9 yd³
heaped ..... 16,5m³ 21.6 yd³

With overhung tailgate (optional)
Body, struck .................. 13,2 m³ 17.3 yd³
heaped ...... 17,2 m³ 22.5 yd³
INSTRUCTIONS
Diagonal lines represent total resistance (grade % plus rolling resistance %).
Charts based on 0 % rolling resistance, standard tires and gearing, unless otherwise stated.
In the retardation chart, the diagonal lines represent the "total resistance" as well (here in downhill grades it is the total extra pushing force), which is the grade in % minus the rolling resistance in %.

A. Find the diagonal line with the appropriate total resistance on the right-hand edge of the chart.
B. Follow the diagonal line downward until it intersects the actual machine weight line, NMW or GMW.
C. Draw a new line horizontally to the left from the point of the intersection until the new line intersects the rimpull or retardation curve.
D. Read down for vehicle speed.
## STANDARD EQUIPMENT

**Safety and comfort**
- Adjustable steering wheel
- Warning lamps for:
  - Air cleaner, engine
  - Body up
  - Brake pressure
  - Brake failure
  - Coolant level
  - Engine oil pressure
  - Engine temperature
  - Engine dependent steering pump
  - Ground-dependent steering pump
  - Parking brake
  - Transmission malfunction

**Engine and electrical system**
- Low-emission engine
- Turbocharger
- Exhaust retarder
- Alternator
- Preheating coil
- Battery disconnect switch
- Electrical outlet
- Gauges for:
  - Air pressure
  - Engine temperature
  - Engine rpm
  - Fuel
  - Hours
  - Transmission oil temperature

**Electrical**
- Pilot lamps for:
  - Battery charging
  - Turn signals
  - Bogie axles diff. lock
  - Front axle diff. lock
  - Longitudinal diff. lock
  - Lights
  - Main beam
  - Preheating coil

**Drivetrain**
- Torque converter
- Fully automatic transmission
- Drop box, single stage
- Automatic lock-up
- Hydraulic retarder, variable
- Longitudinal differential lock
- Differential lock front axle
- Differential lock first bogie axle
- Differential lock second bogie axle

**External**
- Rear mudflaps
- Mudguard wideners, front 9' 9"

**Body**
- Body with exhaust ducts

**Tires**
- 23.5 R 25

## OPTIONAL EQUIPMENT

### Service and maintenance
- Toolbox
- Central lubrication
- Engine
  - Coolant filter
  - Oil-bath air cleaner
  - Engine coolant preheater, 120 V

### Electrical
- Work lights, roof-mounted

### Cab
- Air-conditioning
- Electrically heated rearview mirrors
  - Kit for radio installation

### External
- Fender wideners

### Body
- Body heating
- Extra front spill guard
- Overhung tailgate, wire-operated
- Rock liner

**Tires**
- 30/65 R 25

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Under our policy of continual 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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**VOLVO**

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