• Engine output:
  SAE J1995, Gross 242 kW (324 hp)
  SAE J1349, Net 241 kW (323 hp)
• Body volume, heaped:
  17.5 m³ (22.9 yd³)
• Load capacity:
  28.0 t (30.9 sh tn)
• Volvo cab designed for high operator visibility, ergonomics and comfort.
• Reduced maintenance.
  No daily or weekly greasing, 250h grease points, 500h engine/1000h transmission oil change interval.
• Contronic Communication System.
• Volvo high performance – low emission electronically controlled direct injected, turbocharged, intercooled diesel engine.
• Fully automatic planetary transmission, electronically controlled.
• Hydraulic transmission retarder.
• Dropbox with longitudinal differential lock.
• 100% lock-up differentials. One longitudinal and three transverse differential locks.
• Front axle with maintenance free, three-point suspension.
• Volvo terrain bogie, individually oscillating axles and high ground clearance.
• Low profile tires 750/65R25.
• Volvo Load & Dump brake.
**DRIVETRAIN**

Volvo components, specifically designed for hauler applications.

**Torque converter:** Single stage with free wheeling stator and automatic lock up on all gears.

**Transmission:** Fully automatic planetary transmission with six forward gears and two reverse gears, with a variable hydraulic retarder.

**Dropbox:** Volvo design. All axles have transversal differential locks with 100% lock-up and fully floating axle shafts with planetary type hub reductions.

**Differential locks:** One longitudinal and three transverse with 100% lock-up function, operator selectable on the move.

**Configuration:** 6x4 or 6x6 drive, operator selectable on the move.

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**ENGINE**

Volvo inline 6-cylinder, direct injected electronic controlled, turbocharged, intercooled 4-cycle low emission diesel engine with wet replaceable cylinder linings.

**Fan:** Hydrostatically driven, thermostatically controlled, variable speed radiator fan consuming power only when needed.

**Engine brake:** Exhaust retarder.

- **Make, model:** Volvo D10BAAE2*
- **Max power at:** 33.3 r/s (2000 r/min)
- **Flywheel power at:** 33.3 r/s (2000 r/min)
- **Max torque at:** 22.5 r/s (1350 r/min)
- **Displacement total:** 9.6 l (586 in³)
- **Bore:** 120 mm (4.8 in)
- **Stroke:** 140 mm (5.5 in)

*) Meets US (EPA) step 2, California (CARB) step 2 and Europe (EU) step 2.

**) With fan at normal speed. With fan operating at full speed, the flywheel power is 228 kW (306 hp) and maximum torque is 1321 Nm (974 lbf ft) which corresponds to DIN 70020.

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**ELECTRICAL SYSTEM**

All cables, sockets and pins are identified. Cables are enclosed in plastic conduit and secured to main frame. Halogen lights. Prewired for options. Connectors meet IP67 standard for watertightness as necessary.

- **Voltage:** 24 V
- **Battery capacity:** 2x170 Ah
- **Alternator:** 1.54 kW (55 A)
- **Starter motor:** 6.6 kW (8.8 hp)

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**SERVICE**

The Contronic information system monitors all fluid levels, minimizing daily and weekly service times. Time to next service and the status of vital vehicle systems is shown to the operator on a display in the instrument panel.

**Service accessibility:** Fold down front grill with access ladder to remote filter bank, located in front of engine. Large, 90° opening hood for total engine access. Remote drains and drain hose and swing out radiator for easy cleaning.

**Fill capacities**

- **Crankcase:** 38 l (10 US gal)
- **Fuel tank:** 400 l (105.7 US gal)
- **Cooling system:** 80 l (21.1 US gal)
- **Transmission total:** 48 l (12.7 US gal)
- **Dropbox:** 6.5 l (2.2 US gal)
- **Hub:** 5 l (1.3 US gal)
- **Front axle:** 38 l (10 US gal)
- **First bogie axle:** 40 l (10.6 US gal)
- **Second bogie axle:** 38 l (10 US gal)
- **Brake hydraulics:** 2 l (0.53 US gal)
- **Hydraulics system:** 280 l (68.7 US gal)
- **Hydraulics tank:** 180 l (47.6 US gal)

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**SUSPENSION**

Volvo’s unique maintenance free 3-point suspension system. The axles are suspended at three points, which results in independent movement needed in rough terrain.

**Front axle:** One rubber spring with bottoming absorption on each side. Two shock absorbers on each side.

**Bogie:** Volvo’s unique terrain bogie, which permits individual oscillation between the axles. High axle displacement keeps the body level, retaining the load.
**BRAKE SYSTEM**

Dual circuit system with air-hydraulic disc brakes. Complies with ISO 3450 and SAE J1473 at total machine weight.

**Service brakes:** Dry discs on all wheels.

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

**Parking brake:** Spring-applied 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.

**Retarder:** Hydraulic transmission retarder, infinitely variable.

Total retarding capability including transmission retarder and exhaust retarder, see graph.

**STEERING SYSTEM**

Hydromechanical self-compensating articulated steering for safe and accurate high speed hauling. Fast acting, low effort steering with 3.4 lock-to-lock turns for slow speed maneuverability.

**Cylinders:** Two double-acting steering cylinders.

**Supplementary steering:** Complies with ISO 5010 at total machine weight.

**Steering angle:** ± 45°

**BODY**

Load and dump brake: With the engine running, the service brakes on bogie axles are applied and transmission shifted to neutral.

**Body:** Hardened and tempered steel body, flat plate design fabricated from Hardox 400.

**Cylinders:** Two single stage double acting cylinders.

- Tipping angle ............... 70°
- Tipping time with load ........ 12 s
- Lowering time ............... 9 s
- Body, plate thickness
  - Front 8 mm (0.31 in)
  - Sides 12 mm (0.47 in)
  - Bottom 14 mm (0.55 in)
  - Chute 14 mm (0.55 in)
- Yield strength .................. 900 N/mm² (130000 psi)
- Tensile strength .................. 1250 N/mm² (181000 psi)
- Hardness min. ................... 360 HB

**WEIGHTS**

Operating weight includes all fluids and operator. If equipped with 750/65R25 tires (optional), add 200 kg (441 lb) per axle.

**Operating weight:** with tires 23.5R25.

- Unloaded
  - Front 12 300 kg (27 116 lb)
  - Rear 10 360 kg (22 839 lb)
  - Total 22 660 kg (49 956 lb)
- Payload ....................... 28 000 kg (61 728 lb)

- Total weight:
  - Front 14 790 kg (32 606 lb)
  - Rear 35 870 kg (79 078 lb)
  - Total 50 660 kg (111 684 lb)

**GROUND PRESSURE**

At 15% sinkage of unloaded radius and specified weights.

**With tires:** 750/65R25 23.5R25 (optional)

- Unloaded
  - Front 101 kPa (14.6 psi) 127 kPa (18.4 psi)
  - Rear 43 kPa (6.2 psi) 54 kPa (7.8 psi)
- Loaded
  - Front 121 kPa (17.5 psi) 152 kPa (22.0 psi)
  - Rear 146 kPa (21.2 psi) 183 kPa (26.5 psi)
RIMPULL & RETARDATION  Volvo A30D 6x6

RIMPULL
1. Rimpull in kp (lbf).
2. Speed in km/h (mph).
4. Grade in % + rolling resistance in %.

RETARDATION PERFORMANCE (Transmission and exhaust retarders)
1. Braking effort in kp (lbf).
2. Speed in km/h (mph).
4. Grade in % – rolling resistance in %.

INSTRUCTIONS
Diagonal lines represent total resistance (grade % plus rolling resistance %).
Charts based on 0% rolling resistance, standard tires and gearing, unless otherwise stated.

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 intersection until the new line intersects the rimpull or retardation curve.
D. Read down for vehicle speed.
**DIMENSIONS**   **Volvo A30D 6x6** (unloaded with 750/65R25 tires)

**LOAD CAPACITY** (body volume according to SAE 2:1)

<table>
<thead>
<tr>
<th>Description</th>
<th>Capacity</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load capacity</td>
<td>28 000 kg</td>
<td>(31 sh tn)</td>
</tr>
<tr>
<td>Body, struck</td>
<td>13.6 m³</td>
<td>(17.8 yd³)</td>
</tr>
<tr>
<td>Body, heaped</td>
<td>17.5 m³</td>
<td>(22.9 yd³)</td>
</tr>
<tr>
<td>With overhanging tailgate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body, struck</td>
<td>14 m³</td>
<td>(18.3 yd³)</td>
</tr>
<tr>
<td>Body, heaped</td>
<td>18.1 m³</td>
<td>(23.7 yd³)</td>
</tr>
</tbody>
</table>

*with 23.5R25 Tire*
## STANDARD EQUIPMENT

**Safety**
- ROPS/ FOPS protected cab
- Service platform for ease of service
- Anti-slip material on hood and fenders
- Hazard lights
- Horn
- Protective grille for rear window
- Rearview mirrors
- Retractable 3 inch safety belt
- Secondary steering
- Steering joint locking
- Dump body lock
- Windshield wipers with intermittent
- Windshield washers
- Reverse alarm

**Comfort**
- Tilt/telescopic steering wheel
- Cab heater with filtered fresh air and defroster
- Overhead console for radio and storage
- Sun visor
- Tinted glass
- Can holder/storage tray
- Cigarette lighter
- Ashtray
- Space for lunch cooler
- Storage box
- Air suspended, electrically heated operator’s seat

**Operator information interface**
- Gauges:
  - Speedometer
  - Tachometer
  - Brake pressure
  - Fuel
  - Transmission oil temperature
  - Pilot lamps for all switches
  - Warning lamps grouped and easy to read
  - Central warning (3 levels) for all vital functions
  - Central positioned information display:
    - Automatic pre-start checks
    - Operation information, easy-to-find menu
    - Troubleshooting diagnostics
    - Hour meter
    - Clock
    - Machine settings

**Evil system**
- 55 A alternator
- Battery disconnect switch
- Extra 24 V socket for lunch cooler
- Lights:
  - Headlights
  - Parking lights
  - Direction indicators
  - Rear lights
  - Reverse lights
  - Brake lights
  - Cab lighting
  - Instrument lighting

**Drivetrain**
- Automatic transmission
- Torque converter with automatic lock-up
- Dropbox, single stage
- Hydraulic variable retarder
- 6x4 or 6x6 operator selectable drive modes
- Longitudinal differential lock
- 100% differential locks in all axles

**Brakes**
- Air-hydraulic disc brakes
- Two circuit brake system
- Parking brake on prop shaft

**Body**
- Body prepared for exhaust heating
- Load and Dump brake

**Tires**
- 750/65R25 or 23.5R25

**Other**
- Air drier
- Electrical hood opening
- Rear mudflaps
- Toolbox

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**OPTIONAL EQUIPMENT**

**Service and Maintenance**
- Tool kit with tire inflation unit

**Engine**
- Engine coolant pre-heater (120V or 240V)
- Extra long life service free endurance air filter
- External emergency engine stop
- Delayed engine stop
- High idle speed

**Electrical**
- Work lights, roof-mounted
- Work lights, reverse, fender-mounted
- Rotating beacon, collapsible mount
- Rear vision system – monochrome or color display
- Anti-theft system (prevents engine start)
- Alternator, heavy duty 80 A

**Cab**
- Cable kit for cab heater 120V
- Electric heated rearview mirrors
- Electric heated mirrors
- Vandalism protection

**External**
- Front mudguard wideners (for 750/65R25)

**Body**
- Body exhaust heating kit
- Exhaust body heating, front exit
- Overhung tailgate, wire operated
- Wear plates
- Extra front spigguard

**Other**
- Synthetic hydraulic oil (biologically degradable)
- Arctic oil kit
- Towing hitch
- Lifting tools
- Brake guards

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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.*