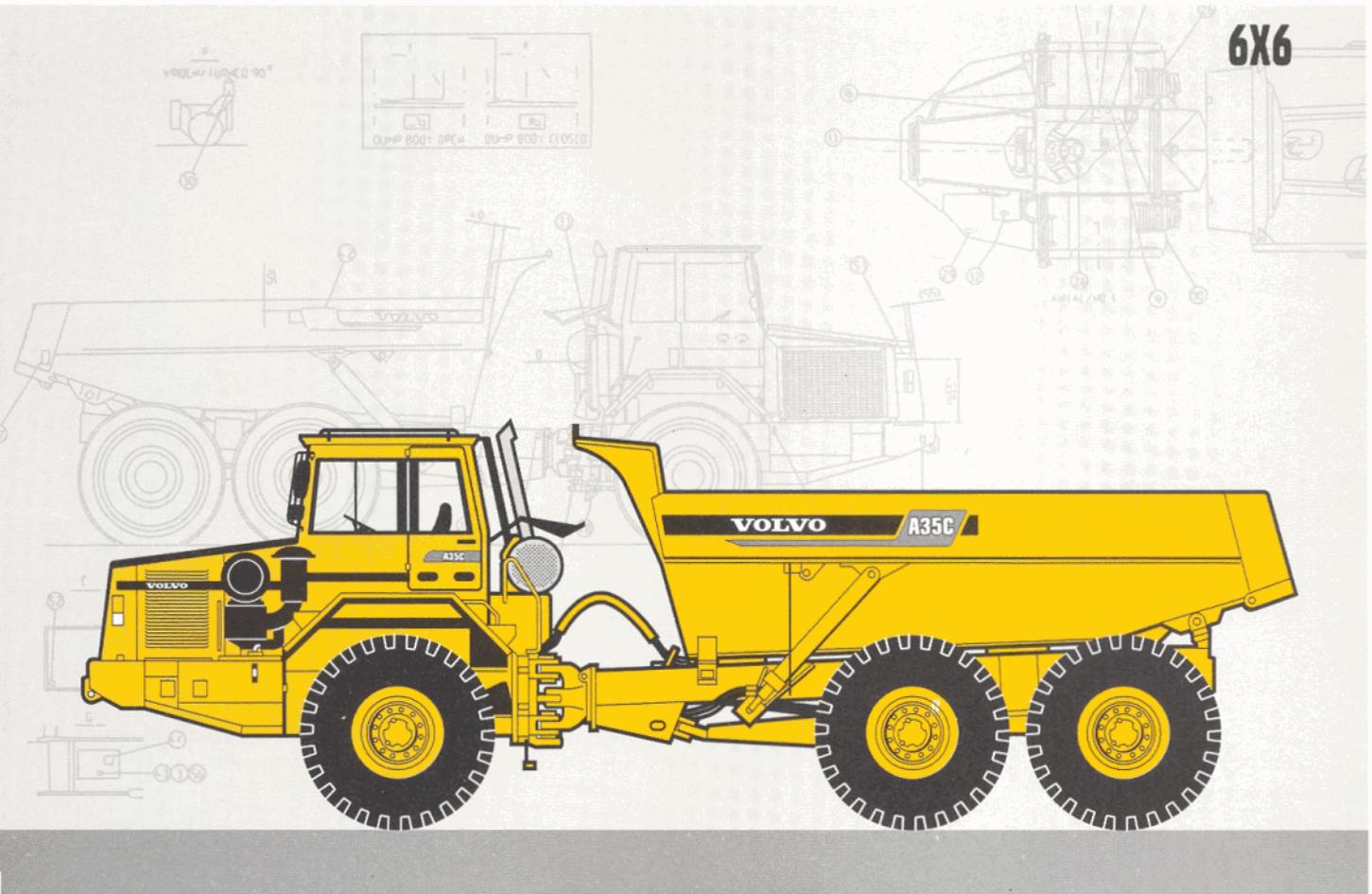


VOLVO ARTICULATED HAULER

A35C



- **Engine output SAE J1349:**
Net 240 kW 322 hp
Gross 245 kW 328 hp
- **Body volume:**
19 m³ 25 yd³
- **Load capacity:**
32 t 35 sh ton
- **Volvo High-performance, low-emission** direct-injected, turbocharged, intercooled diesel engine as standard.
- **Electronically controlled, fully automatic** powershift transmission. High and low gear ranges.
- **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 axles.
- **Low interior noise level.**
- **Adjustable steering wheel.**

VOLVO



ENGINE

Volvo 6-cylinder, in-line, direct-injected, intercooled turbo-charged, 4-cycle low-emission diesel engine with overhead valves and wet replaceable cylinder linings.

Meets USA (EPA) and California off-road regulation 1996.

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

Make	Volvo	
Model	TD122 KAE	
Max power at	35r/s	2100 rpm
SAE J1349 Gross	245 kW	328 hp
Flywheel power at	35 r/s	2100 rpm
SAE J1349 Net	240 kW	322 hp
DIN 6271*	240 kW	322 hp
Max torque at	23 r/s	1200 rpm
SAE J1349 Gross	1475 Nm	1088 lbf ft
SAE J1349 Net	1470 Nm	1084 lbf ft
DIN 6271 **	1470 lbf ft	1084 Nm
Displacement total	12 l	732 in ³
Bore	130 mm	5.13 in
Stroke	150 mm	5.9 in
Compression ratio	16:1	

* with fan at normal speed . With fan operating at full speed, the flywheel power is 228 kW **306 hp**, which corresponds to DIN 70020.

** with fan at normal speed. With fan operating at full speed, the maximum torque is 1340 Nm **988 lbf ft**, which corresponds to DIN 70020.



ELECTRICAL SYSTEM

Voltage	24 V	
Battery capacity	2x170 Ah	
Alternator	1,68 kW	60 A
Starter motor	6,6 kW	8.8 hp



SERVICE CAPACITIES

Crankcase	31 l	8.2 US gal
Fuel tank	360 l	95.1 US gal
Cooling system	78 l	20.6 US gal
Transmission total	40 l	10.6 US gal
Dropbox	8 l	2.1 US gal
Front axle	39 l	10.6 US gal
First bogie axle	41 l	10.8 US gal
Second bogie axle	39 l	10.6 US gal
Brake hydraulics	25 l	6.6 US gal
Hydraulic system	194 l	51.3 US gal
Hydraulic tank	150 l	39.6 US gal
Brake oil tank	11 l	2.9 US gal



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 with 2-stage design, power takeoff and differential locking.

Axles: Volvo, 6-wheel drive. All axles have transverse 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	2.36:1	
Transmission	Volvo PT 1761	
Dropbox	Volvo FL 762	
Axles	Volvo AH 63	

Speeds with tires 26.5 R 25

Low gear forward		
1	5,3 km/h	3.3 mph
2	7,6 km/h	4.7 mph
3	13,8 km/h	8.6 mph
4	19,9 km/h	12.4 mph
5	25,3 km/h	15.7 mph
6	33,6 km/h	20.9 mph

High gear forward		
1	8,6 km/h	5.3 mph
2	12,4 km/h	7.7 mph
3	22,3 km/h	13.9 mph
4	32,3 km/h	20.1 mph
5	41,0 km/h	25.5 mph
6	54,5 km/h	33.8 mph

Low gear reverse		
1	8,5 km/h	5.3 mph

High gear reverse		
1	8,0 km/h	5.0 mph
2	13,8 km/h	8.6 mph



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.



BRAKE SYSTEM

Fully hydraulic disc brakes on all axles. Two circuits.
Designed to comply with ISO 3450 and SAE J1473 at total 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.

Retarder: Hydraulic, infinitely variable, integrated in 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 piston pump for supplementary steering mounted on the dropbox.

Filtration: Through two paper filters with magnetic cores.

Pump capacity per pump . . .	100 l/min	26.5 US gal/min
at shaft speed	34 r/s	2040 rpm
Working pressure	21 MPa	3048 psi



CAB

Volvo cab, tested and approved according to ROPS standard ISO 3471 and SAE J1040/APR 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)



STEERING SYSTEM

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

Cylinders: Two double-acting steering cylinders.

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

Steering angle: ± 45°



BODY

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

Cylinders: Two 3-stage, of which one stage is double-acting.

Tipping angle	73°
Tipping time with load	15 s
Lowering time	18 s
Body plate thickness	
Front	8 mm 5/16 in
Sides	12 mm 1/2 in
Bottom/chute	16 mm 5/8 in
Yield strength	1000 N/mm ² 145,000 psi
Tensile strength	1250 N/mm ² 181,000 psi
Hardness min.	360–440 HB



WEIGHTS

Operating weight includes all fluids and operator. Standard machine.

Operating weight

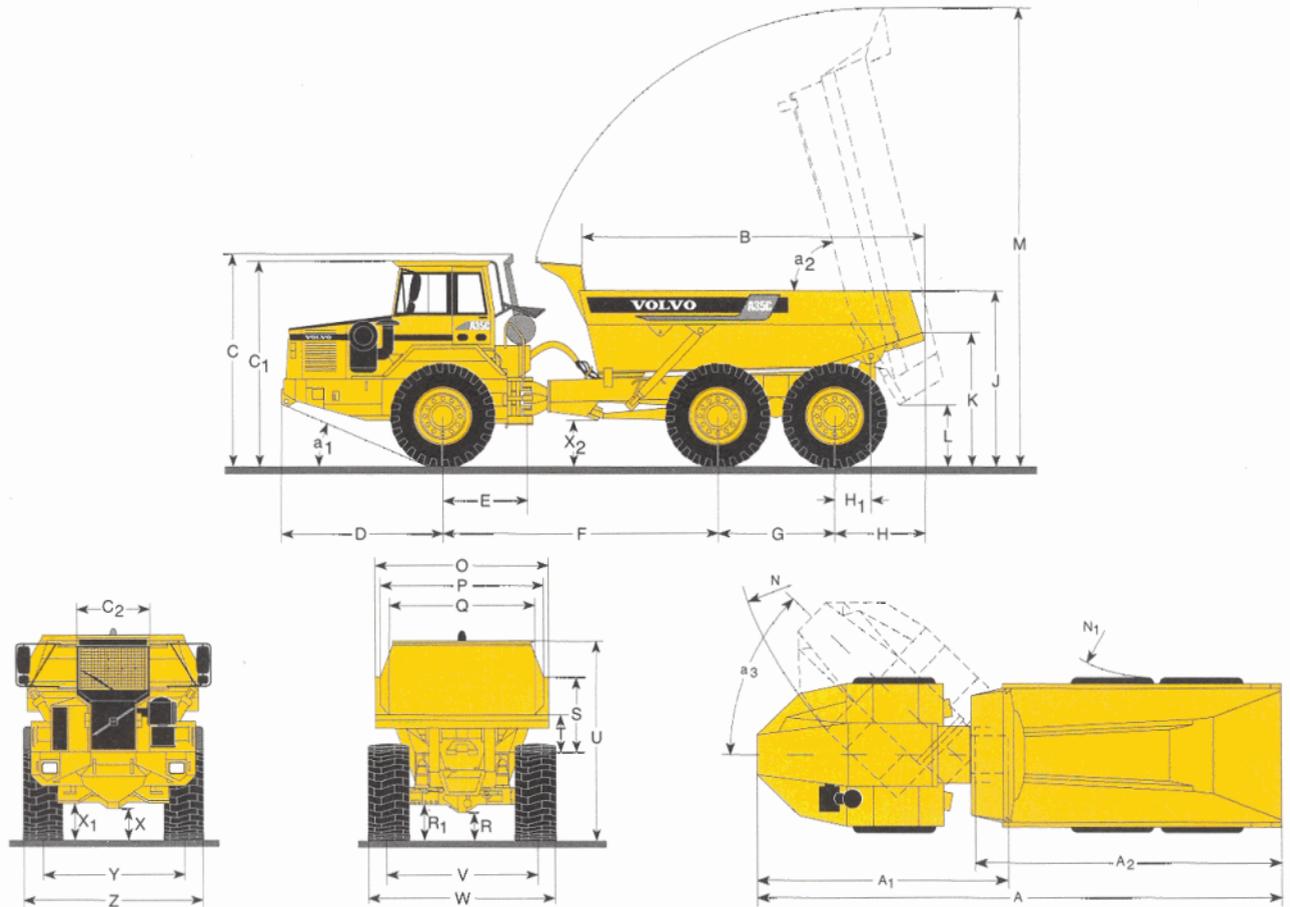
Front	13250 kg	29,210 lb
Rear	12450 kg	27,450 lb
Total	25700 kg	56,660 lb
Payload	32000 kg	70,550 lb
Total weight		
Front	16450 kg	36,270 lb
Rear	41250 kg	90,940 lb
Total	57700 kg	127,210 lb



GROUND PRESSURE

At 15% sinkage of unloaded radius and specified weights.

Unloaded		
Front	111 kPa	16.1 psi
Rear	52 kPa	7.5 psi
Loaded		
Front	138 kPa	20.0 psi
Rear	174 kPa	25.2 psi



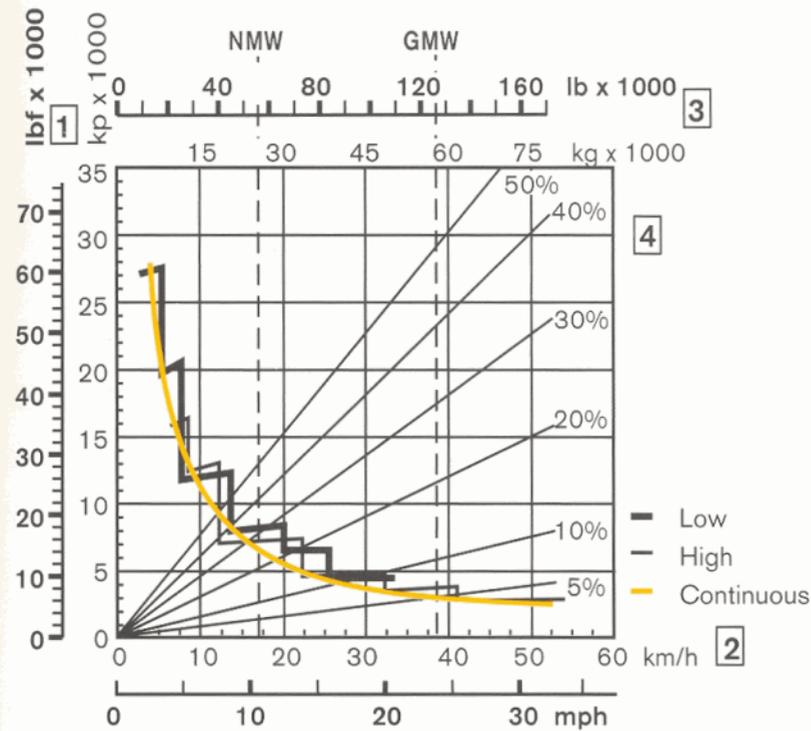
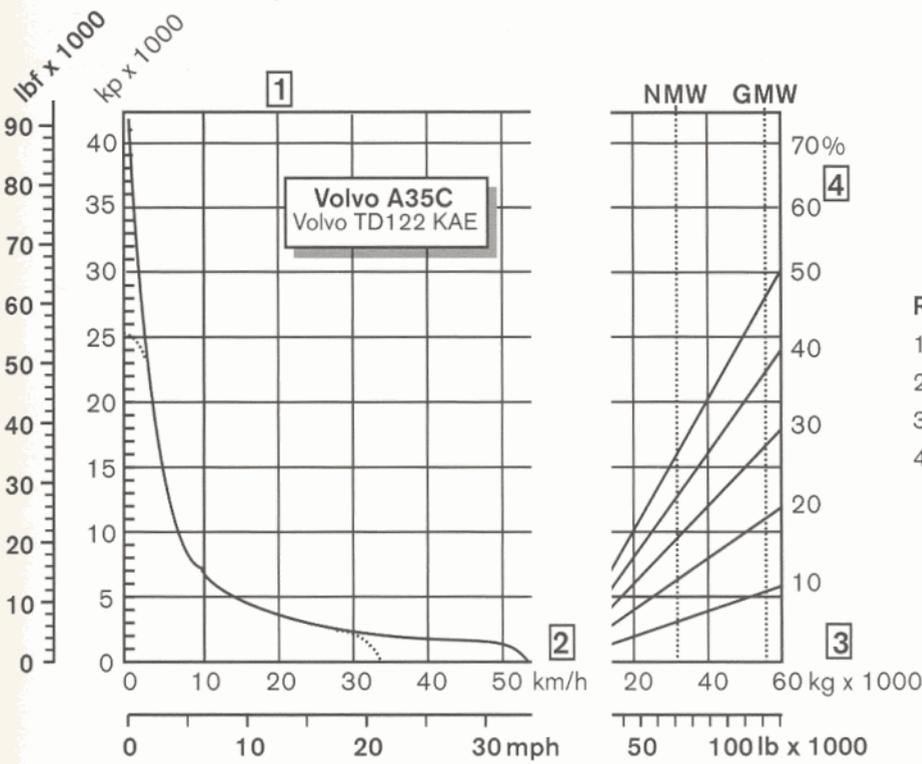
DIMENSIONS Volvo A35C 6x6 (unloaded)

A	10898 mm	35'9"	F	4495 mm	14'9"	N1	4300 mm	14'1"	V	2522 mm	8'3"
A1	5232 mm	17'	G	1820 mm	6'	O	3006 mm	9'10"	W	3200 mm	10'6"
A2	6348 mm	20'10"	H	1624 mm	5'4"	P	2770 mm	9'1"	X	519 mm	1'8"
B	5554 mm	18'3"	I	725 mm	2'5"	Q	2510 mm	8'3"	X1	559 mm	1'10"
C	3604 mm	11'10"	J	2922 mm	9'7"	R	570 mm	1'10"	X2	696 mm	2'3"
C1	3510 mm	11'6"	K	2231 mm	7'4"	R1	670 mm	2'2"	Y	2522 mm	8'3"
C2	1330 mm	4'4"	L	1054 mm	3'5"	S	1274 mm	4'2"	Z	3200 mm	10'6"
D	2959 mm	9'8"	M	7529 mm	24'8"	T	595 mm	1'11"	a1	25°	
E	1270 mm	4'2"	N	8694 mm	28'6"	U	3486 mm	11'5"	a2	73°	
C*	3997 mm	13'1"							a3	45°	

C* with optional spill guard in upright position

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

US body load capacity	.....	32000 kg	35 sh tn	With overhung tailgate (optional)			
Body, struck	.....	14,8 m ³	19 yd ³	Body, struck	.....	15,2 m ³	20 yd ³
heaped		19 m ³	25 yd ³	heaped		19,8 m ³	26 yd ³



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

ROPS/FOPS cab
 Anti-slip material on hood and fenders
 Back-up warning alarm
 Hazard flashers
 Horn
 Protective grille for rear window
 Cab heater with filtered fresh air and defroster
 Contronic information panel
 Ergonomically designed and adjustable operator's seat with air suspension and electric heating
 Trainer's seat
 Windshield wipers with interval
 Windshield washers
 Rearview mirrors
 Seat belt
 Sun visor
 Tinted glass
 Cigarette lighter
 Ashtray
Lights:
 • Headlights, high/low beam
 • Parking lights
 • Turn signals
 • Rear lights
 • Brake lights
 • Back-up lights
 • Cab lighting
 • Instrument lighting

Adjustable steering wheel
 Radio/Contronic console in ceiling
 Speedometer
 Steering joint locking assembly
 Secondary steering

Engine and electrical system

Low-emission engine
 Turbocharger
 Intercooler
 Exhaust retarder
 Oil drainage hose
 Alternator
 Preheating coil
 Battery disconnect switch
 Electrical outlet
Gauges for:
 • Air pressure
 • Engine temperature
 • Engine rpm
 • Fuel
 • Hours
 • Transmission oil temperature
Pilot lamps for:
 • Turn signals
 • Bogie axles diff. lock
 • Front axle diff. lock
 • Longitudinal diff. lock
 • Lights
 • High beam
 • Preheating coil

Warning lamps for:

- Air cleaner, engine
- Battery charging
- Body up
- Brake pressure
- Brake fluid level
- Coolant level
- Engine oil pressure
- Engine temperature
- Engine-dependent steering pump
- Ground-dependent steering pump
- Parking brake
- Transmission/ drop box malfunction

Central warning for:

- Battery charging
- Brake cooling oil level
- Brake pressure
- Body up
- Engine oil pressure
- Engine overspeed
- Steering function
- Transmission/ drop box malfunction

Drivetrain

Torque converter
 Fully automatic transmission
 Drop box with high/low range
 Automatic lockup
 Hydraulic, variable transmission retarder
 Longitudinal differential lock
 Differential lock front axle
 Differential lock first bogie axle
 Differential lock second bogie axle

Body

Body with exhaust ducts

External

Rear mudflaps

Tires

26.5 R 25

OPTIONAL EQUIPMENT

Service and maintenance

Toolbox
 Central lubrication

Engine

Coolant filter
 Engine coolant preheater, 120 V
 Oil-bath air cleaner

Electrical

Work lights, roof-mounted

Cab

Air-conditioning
 Electrically heated rearview mirrors
 Kit for radio installation

Body

Body heating
 Extra front spill guard
 Overhung tailgate, wire-operated
 Upper side extensions, 100 mm 4"
 Rock liner

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.

VOLVO

Volvo Construction Equipment

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