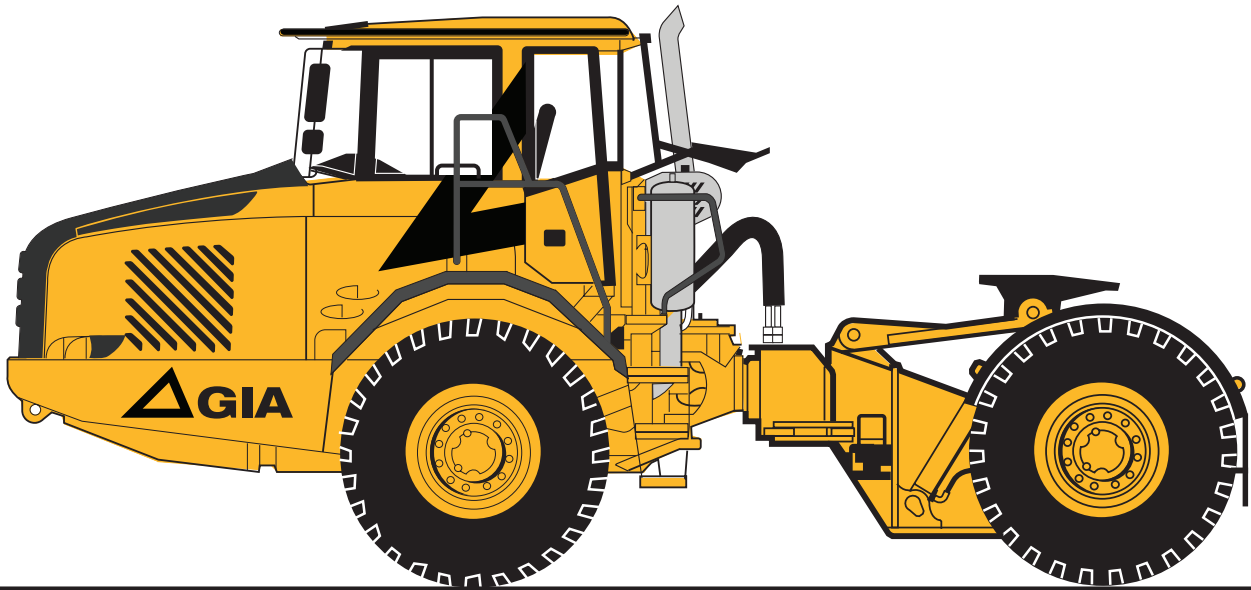




## TRAILER TRACTOR T25E POWERED BY VOLVO



- **Engine output:**

T25E

SAE J1995, Gross 224 kW (305 hp)

SAE J1349, Net 223 kW (303 hp)

- **Load capacity:**

32 t

- **CAB**, designed for high operator visibility, ergonomics and comfort.
- **Reduced maintenance time** with no daily or weekly grease points.
- **Electronic Operator's Communication System**
- **Volvo high performance — low emission**, electronically controlled, direct injected, turbocharged, intercooled diesel engine.
- **Fully automatic planetary transmission**, electronically controlled.
- **Hydraulic retarder** integral in transmission.
- **Dropbox with longitudinal differential lock**
- **100% lock-up differentials**. One longitudinal and two transverse differential locks.
- **Front axle with three-point suspension**.

# The Trailer Tractor in detail

## Service

The computerized 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 drain hoses and swing-out radiator for easy cleaning.

## Fill capacities

Crankcase .....	40 l
Fuel tank .....	400 l
Cooling system .....	115 l
Transmission total .....	41 l
Dropbox .....	8,5 l
Front axle .....	33 l
Rear axle .....	33 l
Hydraulic tank .....	175 l

## Engine

Volvo inline 6-cylinder, direct injected electronically controlled, turbocharged, intercooled 4-stroke low-emission diesel engine with wet replaceable cylinder liners.

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

**Engine brake:** Exhaust retarder.

Make, model .....	D9BABE3*/AAE3**
Max power at .....	35 r/s (2 100 r/min)
SAE J1995 Gross .....	224 kW (305 hp)
Flywheel power at .....	35 r/s (2 100 r/min)
SAE J1349 Net, DIN 6271*** .....	223 kW (303 hp)
Max torque at .....	20 r/s (1 200 r/min)
SAE J1995 Gross .....	1 700 Nm
SAE J1349 Net, DIN 6271*** .....	1 689 Nm
Displacement total .....	9,4 l

\*) Meets Europe (EU) stage 3A.

\*\*) Meets US (EPA) Tier 3, California (CARB) Tier 3 and Europe (EU) stage 2.

\*\*\*) with fan at normal speed.

With fan operating at full speed, the flywheel power is 210 kW (285 hp) and maximum torque is 1 589 Nm which corresponds to DIN 70020.

## Electrical system

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

Voltage .....	24 V
Battery capacity .....	2x170 Ah
Alternator .....	2,24 kW (80 A)
Starter motor .....	7 kW (9,4 hp)

## Drivetrain

**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 built-in variable hydraulic retarder.

**Dropbox:** Volvo design, single-stage.

**Axles:** Volvo design with fully floating axle shafts and planetary type hub reductions.

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

**Configuration:** 4-wheel drive.

Torque converter .....	2,37:1
Transmission, Volvo .....	PT 1563
Dropbox .....	IL 1
Front axle, Volvo .....	AH 64
Rear axle, Volvo .....	AH 64

## Speed:

Forward	
1 .....	8 km/h
2 .....	12 km/h
3 .....	22 km/h
4 .....	30 km/h
5 .....	30 km/h
6 .....	30 km/h
Reverse	
1 .....	8 km/h
2 .....	13 km/h

## Brake system

Dual circuit system with air-hydraulic disc brakes. Meets 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 rear axle.

**Parking brake:** Spring-applied disc brake on the propeller shaft. When the parking brake is applied, the longitudinal differential is locked.

**Compressor:** Gear-driven by engine transmission.

**Retarder:** Hydraulic, infinitely variable, integrated in transmission.

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 turns lock-to-lock for slow speed maneuverability.

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

**Secondary steering:** Meets ISO 5010 at total machine weight.

**Steering angle:** ±45°

## Suspension

Volvo's unique maintenance-free 3-point suspension system.

**Front axle:** One hollow rubber spring on each side. A cross stay provides the stability. Two shock absorbers on each side.

**Rear axle:** No suspension

## Cab

Ergonomically designed for high operator comfort and excellent visibility. Wide threshold-free door opening and ergonomic cab entrance. Insulating rubber pads to reduce vibrations. Tilt/ telescopic steering wheel.

Stick steering system for reverse travelling (optional). Overhead console for radio and storage. Dash-mounted Operator's Communication System. Storage bins.

Extra throttle and service brake pedal for reverse travelling (optional)

**Standard:** ROPS/FOPS tested and approved. (ISO 3471, SAE J1040)/(ISO 3449, SAE J231) standards.

**Heater and defroster:** Filtered fresh air, four-speed fan and pressurized cab to maintain a clean operating environment. Multi-level air outlets and separate defroster vents for all windows.

**Operator's seat:** Adjustable operator's seat with flameproof upholstery.

Retractable seat belt. Rotating function (option). Armrests prepared for joysticks (option).

Sound level in cab, ISO 6396 74 dB (A)

## Hydraulic system

Load-sensing, variable displacement, piston pumps, consume power only when needed.

**Pumps:** Four engine-driven variable displacement load-sensing piston pumps driven by the flywheel PTO. One ground-dependent piston pump for secondary steering mounted on the dropbox.

**Filter:** One fibreglass filter with magnetic core.

## Pump capacity per pump:

Engine-dependent .....	146 l/min
Ground-dependent .....	122 l/min
at shaft speed .....	(46,2 r/min)
Working pressure .....	25 MPa

## Trailer Connections (optional):

Pressure and return line quick couplings behind the cab.

Flow at 1000 rpm .....	148 l/min
Pressure (max) .....	25 MPa

## Fifth Wheel

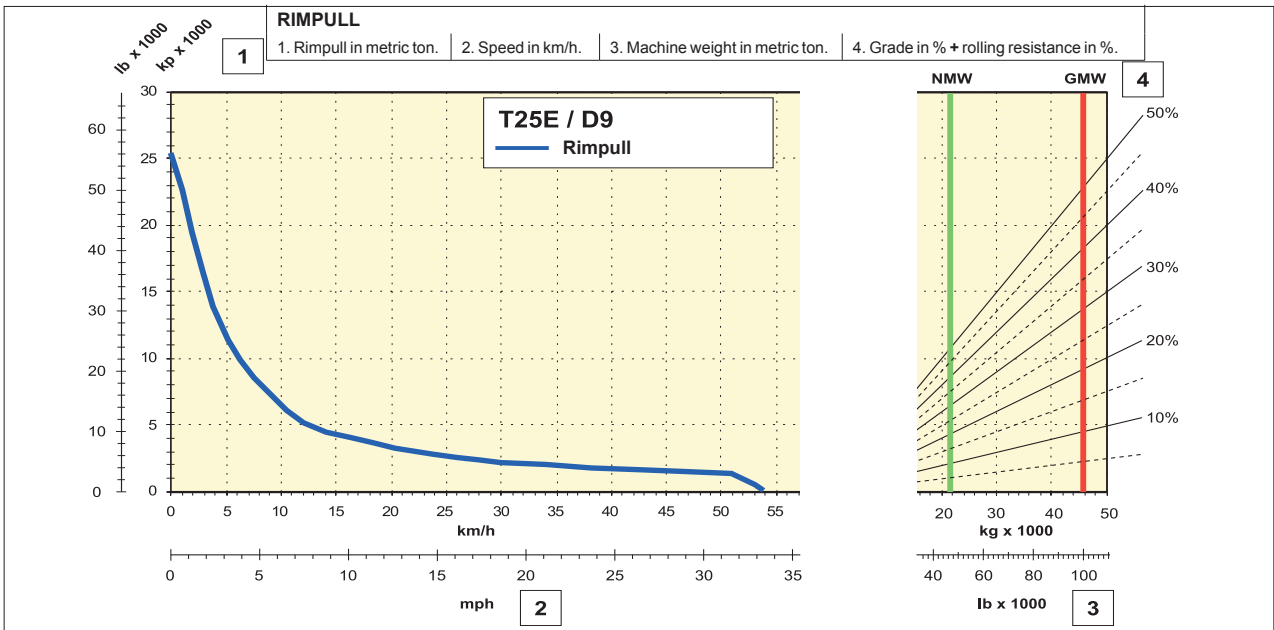
**Type:** Jost JSK 38G

**King-pin size:** 3,5" std. - 2" (optional)

**Assembly system to lift frame:** Jost

**Other:** Cardanic suspension. Allowed for forced motion of trailer

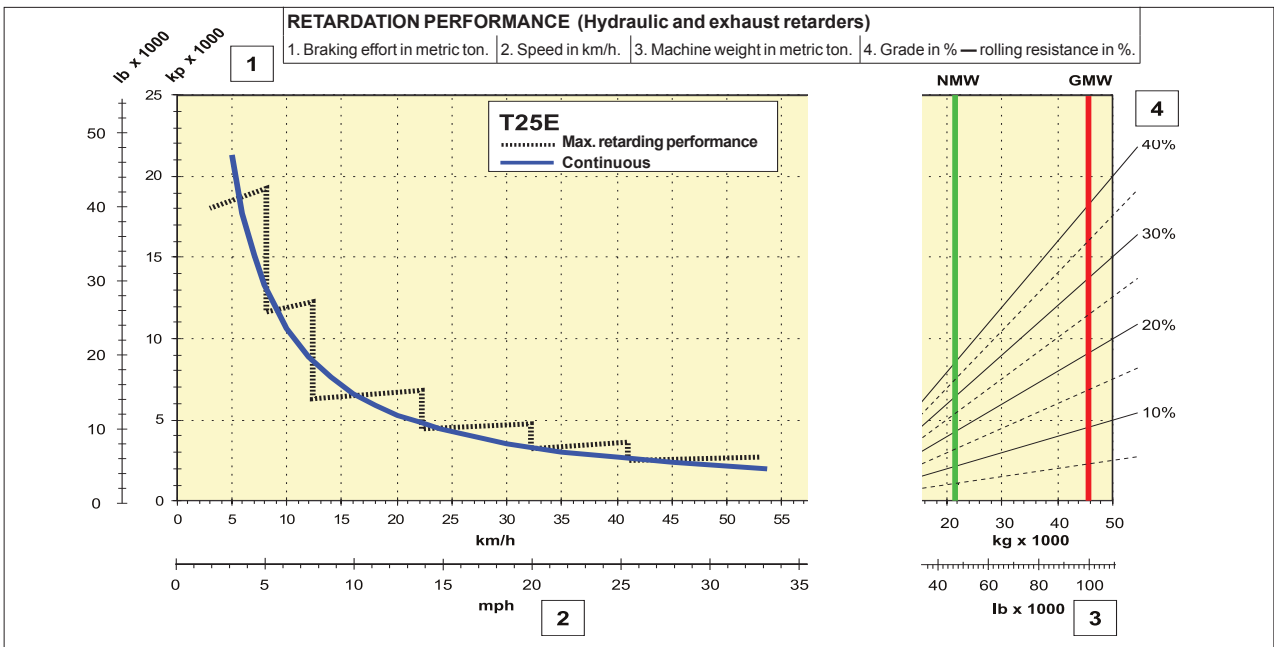
**Lift system:** Two single stage double acting cylinders with pilot operated locking valves and pressure relief valve.



**Instructions**

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

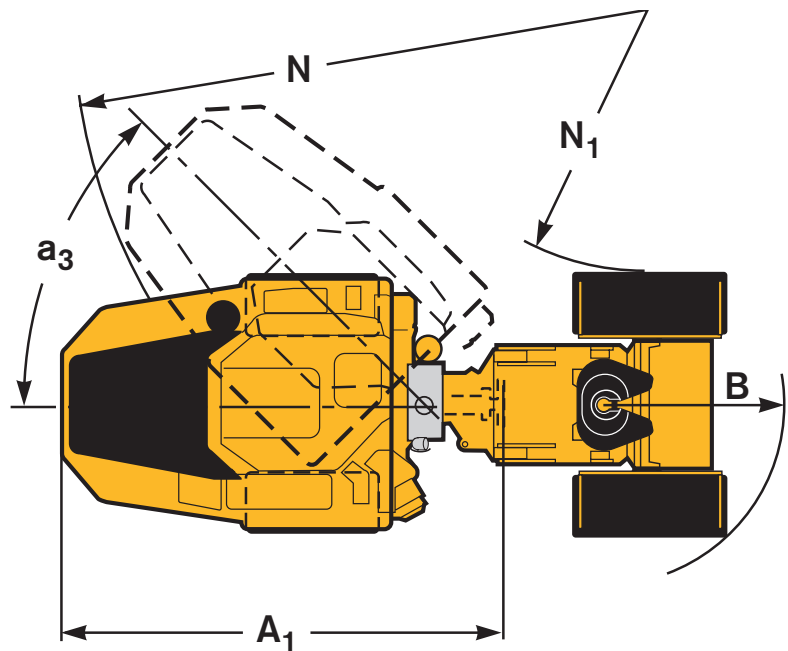
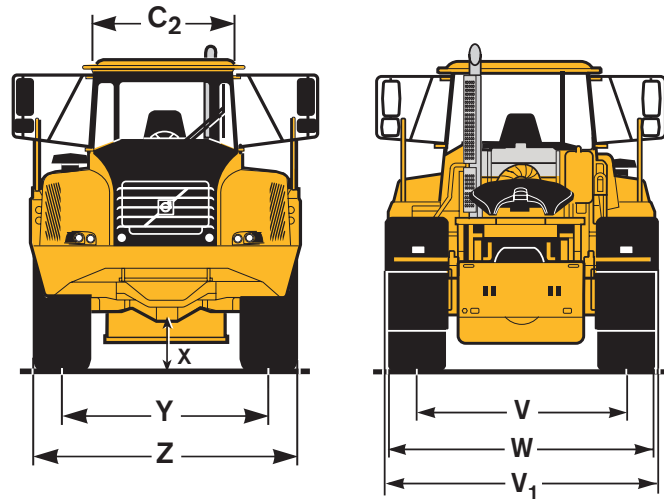
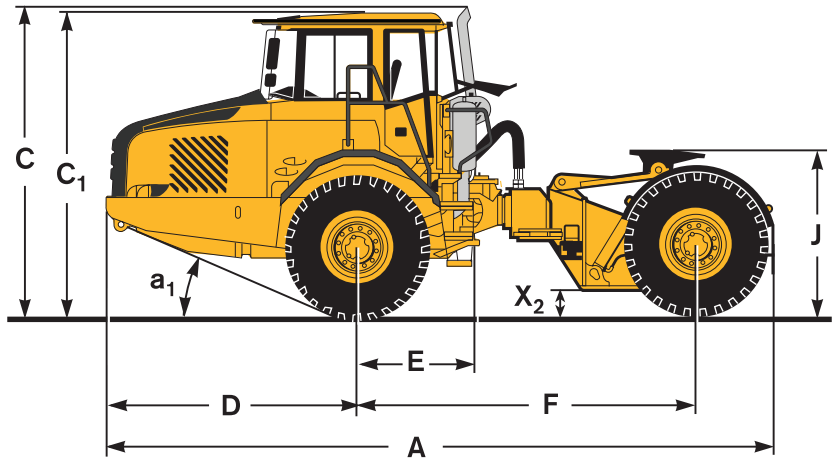
- A. Find the diagonal line with the appropriate total resistance on the right-hand edge of the chart.
- B. Follow the diagonal line downward until it intersects the actual machine weight line, NMW or GMW.
- C. Draw a new line horizontally to the left from the point of intersection until the new line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



# Specifications

Pos	Metric	Imp.
A	7 355 mm	24'2"
A <sub>1</sub>	4 954 mm	16'3"
B	1 956 mm	6'5"
C	3 470 mm	11'5"
C <sub>1</sub>	3 332 mm	10'11"
C <sub>2</sub>	1 768 mm	5'10"
D	2 764 mm	9'1"
E	1 210 mm	4'0"
F	3 710 mm	12'2"
J*	1 380 mm	4'6"
J**	1 920 mm	6'4"
J***	1 860 mm	6'1"
N	6 239 mm	20'6"
N <sub>1</sub>	2 758 mm	9'1"
V	2 258 mm	7'5"
V <sub>1</sub>	2 908 mm	9'6"
W	2 859 mm	9'5"
X <sub>2</sub>	350 mm	1'2"
Y	2 258 mm	7'5"
Z	2 859 mm	9'5"
a <sub>1</sub>	23,5°	23.5°
a <sub>3</sub>	45°	45°

Unloaded machine with 23,5R25  
 J\* Minimum height  
 J\*\* Maximum height  
 J\*\*\* Maximum height loaded





Weights		Ground Pressure		Load Capacity	
Operating weight includes all fluids and operator and tires		At 15% sinkage of unloaded radius and specified weights.			
<b>Tires</b>	23,5R25		23,5R25		
<b>Operating weight unloaded</b>		<b>Unloaded</b>			
Front	11 000 kg	Front	111 kPa	<b>Load capacity, fifth wheel</b>	32 000 kg
Rear	3 500 kg	Rear	37 kPa		
Total	14 500 kg	<b>Loaded</b>			
Payload, Fifth wheel	32 000 kg	Front	152 kPa		
<b>Total weight</b>		Rear	324 kPa		
Front	14 900 kg				
Rear	31 600 kg				
Total	46 500 kg				

## STANDARD EQUIPMENT

### Safety

ROPS/ FOPS protected cab  
Service platform for ease of service  
Anti-slip material on hood and fenders  
Hazard lights  
Horn  
Rear-view mirrors  
Secondary steering  
Retractable 3-inch safety belt  
Steering joint locking assembly  
Safety bar for lift platform\*  
Intermittent wiper control  
Windshield washers  
Speed limiting device, 30 km/h \*

### Comfort

Tilt/telescopic steering wheel  
Cab heater with filtered fresh air and defroster  
Overhead console for radio  
Sun visor  
Tinted glass  
Can holder /storage tray  
Cigarette lighter  
Ashtray  
Space for lunch cooler  
Storage box

### Engine

Direct injected, electronically controlled  
Turbocharged, intercooled  
Remote oil drain plug  
Remote oil filters, for ease of access  
Preheater for easier cold starts

### Electrical system

55 A alternator  
Battery disconnect switch  
Extra 24 V socket for lunch cooler

#### Lights:

- Headlights
- Parking lights
- Direction indicators
- Rear lights
- Back-up lights
- Brake lights
- Cab lighting
- Instrument lighting

### Operator information interface

#### Gauges:

- Speedometer
- Tachometer
- Brake pressure
- Fuel
- Transmission oil temperature

Pilot lamps for all switches  
Pilot lights for all switches  
Warning lights grouped and easy to read

#### Central positioned information display:

- Automatic pre-start checks
- Operation information, easy-to-find menu
- Troubleshooting diagnostics
- Hour meter
- Clock
- Machine settings

### Drivetrain

Automatic transmission  
Torque converter with automatic lock-up  
Drop-box, single-stage  
Hydraulic variable retarder  
100% longitudinal differential lock  
100% differential locks in all axles

### Brakes

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

### Tires

23,5R25

### Fifth Wheel

Lifting platform with two hydraulic cylinders \*  
3,5" King-pin system \*  
Manual King-pin locking system \*  
Cardanic suspension, Jost JSK 38G \*

### Other

Air drier

(\* Special Standard Equipment)

## OPTIONAL EQUIPMENT

### Safety

Fire-extinguisher and first aid kit  
Extra Central warning light, visible during reverse operation \*\*

### Service and maintenance

Tool kit with tire inflation unit  
Electrical hood opening

### Engine

Extra air cleaner, heavy-duty  
Extra air cleaner, oil bath type  
External emergency engine stop  
Delayed engine stop  
Electric engine heater (120V or 240V)  
Engine and cab heater, diesel \*\*  
Fuel filter heater, electrical, 24V \*\*  
Fast fuel filling system \*\*

### Electrical

Work lights, roof mounted  
Work lights, rear-facing, fender-mounted  
Work lights (distance lights) on cab roof \*\*  
Rotating beacon, collapsible mount  
Rotating beacon, extra  
Back-up alarm  
Rear vision system  
Anti-theft system (prevents engine start)  
Headlights for left-hand traffic  
Alternator, heavy-duty 80 A  
Battery charger \*\*  
Jump start connection, NATO \*\*  
Rear- and backup lights on cab roof \*\*  
Electric cab heater \*\*

### Cab

Air suspended, electrically heated operator's seat  
Rotating drivers seat 180° \*\*  
Seat cover \*\*  
Armrests prepared for joysticks \*\*  
Instructor seat with seat belt  
Electrically heated rear-view mirrors  
Air conditioning  
Radio installation kit  
Radio  
Cable kit for cab heater (120V or 240V)  
Window tint film  
Stick steering system for reverse travelling \*\*  
Steering wheel for reverse travelling \*\*  
Throttle pedal for reverse travelling \*\*  
Brake pedal for reverse travelling \*\*  
Rear-view mirrors for reverse travelling \*\*  
Exhaust pipe moved for reverse travelling \*\*  
Washer and wiper for rear window \*\*  
Vandalism protection for cab windows \*\*  
Rear-view mirror, close up \*\*  
Control lever for trailer brake \*\*  
Remote control device for Fifth Wheel locking mechanism \*\*  
Lowered cab roof  
Roof rack \*\*

### External

Rubber fenders and mud flaps for rear wheels \*\*

### Hydraulic

Hydraulic tank, extra, 300 l \*\*  
Trailer hydraulic connections behind the cab, pressure and return line with quick couplers \*\*

### Fifth Wheel

2" King-pin system \*\*  
Central lubrication for Fifth Wheel \*\*

### Other

Synthetic hydraulic oil (biologically degradable)  
Toolbox  
Quick couplers for trailer brakes and lights located behind the cab \*\*

### Tires

650/65R25

(\*\* Special Optional Equipment)



GIA Industri AB

Box 59, 772 22 Grängesberg, Sweden

Phone +46 240 797 00 Fax +46 240 797 25

E-mail: [info@gia.se](mailto:info@gia.se)

Web: [www.gia.se](http://www.gia.se)

