DEVELON

Articulated Dump Truck DA45-5



Engine

| Make | Scania |
|--------------------------------------|--|
| Model | DC13 |
| Number of cylinders | 6 |
| Rated power, gross (hp per ISO 3046) | 493.5 hp (368.0 kW) @ 2100 rpm |
| Rated power, net (hp per ISO 14396) | 482.8 hp (360.0 kW) @ 2100 rpm |
| Max. torque, gross | 1750.2 lbf.·ft. (2373.0 Nm) @ 1300 rpm |
| Displacement | 775.0 in. ³ (12.7 L) |
| Bore and stroke | 5.1" x 6.3" (130 mm x 160 mm) |
| Starter | 24 V, 8.0 hp (6.0 kW) |
| Battery | 2 x 12 V, 105 AH |
| Alternator | 24 V, 100 A |
| Air cleaner | Double elements |

Hydraulics

| Main pumps | 77.7 gpm (294.0 L/min.) |
|----------------------------|-------------------------|
| Relief pressure (main) | 4061.1 psi (280.0 bar) |
| Emergency steer pump | 13.2 gpm (50.0 L/min.) |
| System pressure (steering) | 3045.8 psi (210.0 bar) |

Travel Speeds

| Travel speed – reverse (4) | 3.7/5.6/7.5/10.6 mph (6.0/9.0/12.0/17.0 km/h) | |
|----------------------------|--|--|
| Travel speed – forward (8) | 3.7/5.6/7.5/10.6/14.9/21.1/29.8/34.2 mph (6.0/9.0/12.0/17.0/24.0/34.0/48.0/55.0 km/h) | |

Environment

| Sound level (ISO 6395) | 107 dB(A) |
|------------------------------|-----------|
| Cabin sound level (ISO 6396) | 71 dB(A) |

Dump Body

| Dump body volume | (2:1) | 34.0 yd³ (26.0 m³) |
|--|--------------------|-------------------------------|
| Dump body dumping time | | Up: 12 sec / Down: 10 sec |
| with tailgate | | 26.7 yd³ (20.4 m³) |
| Level capacity w | without tailgate | 25.6 yd³ (19.6 m³) |
| Heaped capacity with tailgate without tailgate | 34.0 yd³ (26.0 m³) | |
| | without tailgate | 31.9 yd³ (24.4 m³) |
| Density index | | 2809.0 lb.·yd³ (1667.0 kg·m³) |

Refill Capacities

| Fuel tank | 129.7 gal. (491.0 L) | |
|------------------------------------|----------------------|--|
| DEF tank | 18.5 gal. (70.0 L) | |
| Cooling system (radiator capacity) | 13.2 gal. (50.0 L) | |
| Engine oil | 11.9 gal. (45.0 L) | |
| Transmission | 18.2 gal. (69.0 L) | |
| Front differential | 2.5 gal. (9.4 L) | |
| Rear differential | Included in tandem | |
| Front hub (2) | 2.5 gal. (9.6 L) | |
| Tandem housing (2) | 60.2 gal. (228.0 L) | |
| Rear hub (4) | Included in tandem | |
| Hydraulic tank | 16.6 gal. (63.0 L) | |

All capacities are approximate values. Always refer to the machine's OM for exact refill levels. Check the dipstick, level eye, level plug, etc., to achieve the correct level.

Hydraulic Cylinders

| Dump body tilt (2) bore x stroke | 4.9" x 102.9" (125 mm x 2614 mm) |
|----------------------------------|----------------------------------|
| Steering (2) bore x stroke | 4.5" x 21.7" (115 mm x 550 mm) |

The piston rods and cylinder bodies are made of high-strength steel. A shock-absorbing mechanism is fitted in at the base and rod end of the lift and bucket cylinders and the rod end of the steering cylinders to ensure shock-free operation and extended piston life.

Features



Suspension

- Front: semi-independent, self-leveling hydro-gas suspension
- · Rear: free-swinging tandem housing

Brake System

- Dual circuit braking system acting on all six wheels
- Outboard hydraulic-operated brakes with enclosed, oil-cooled wet multiple discs on four hubs (braking force distributed to two hubs by tandem gear wheels)
- Spring-actuated hydraulic-released parking brake, mounted on driveline shaft
- · Maximum gradient, parking brake: 14°
- · Automatic hydrodynamic transmission retarder: 4 settings

Driveline

- Full-time 6×6 drive: two transverse differentials and one longitudinal
- Front axle transverse differential: limited-slip diff lock with 45% locking ratio
- Rear axle transverse differential: limited-slip diff lock with 40% locking ratio
- Inter-axle longitudinal differential:

No diesel particulate

- Torque-proportioning differential: integrated into ZF transmission
- Torque distribution: 1/3 to the front axle, 2/3 to the rear axle, 100% lockable
- Tandem housing: gear driven, free-swinging
 Provides equal drive to rear wheels and ensures the best
 possible ground contact whatever the ground conditions.
- Ample ground clearance at articulation hinge (2' 1.3")

Articulation Hinge and Steering

- · Articulation hinge with forward-mounted turning ring
- Steering cylinders (two): double-acting
- Maximum steering angle: 45°
- · Ground-driven emergency steering pump

Cab

Comfort

- Cab centrally located on rubber mountings
- Whole body vibration less than 0.5 ms²
- Ergonomic operating controls location
- · Pressurized and sealed cab
- · Climate control: heater and air conditioning
- Adjustable heated air-suspension seat
- · Adjustable steering column
- Standard radio supports MP3, digital audio and Bluetooth® wireless technology
- 12 V power source and spacious storage department
- 2 USB ports

Safety & Visibility

- Approved to ROPS/FOPS standards (ISO 3471/ISO 3449)
- Low interior sound level: 72 dB(A) (ISO 6396)
- External sound level: 108 dB(A) (ISO 6395)
- · Superior visibility for safer operation
- · Adjustable heated mirrors
- · All-around handrails
- · Front entry to cab
- · Ground level fluid fill points and site gauges

Serviceability

- Tilting cab for service access
- Grouped hydraulic test ports



- Automatic central lubrication system
- Bed heater keeps material from sticking to body

Dimensions

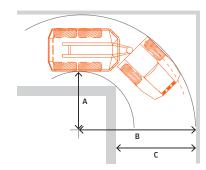
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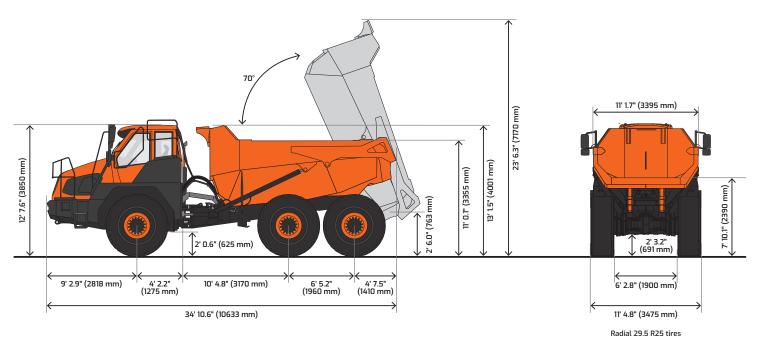
| Cuasa waisht | | 15 C 7 (O 15 (71100 15-) |
|----------------------------|------------|--------------------------|
| Gross weight | | 156749 lb. (71100 kg) |
| Net weight | | 67241 lb. (30500 kg) |
| Payload | | 89508 lb. (40600 kg) |
| Empty weight distribution | front axle | 31967 lb. (14500 kg) |
| | rear axle | 35274 lb. (16000 kg) |
| | front/rear | 47.5%/52.5% |
| Loaded weight distribution | front axle | 48592 lb. (22041 kg) |
| | rear axle | 108157 lb. (49059 kg) |
| | front/rear | 31.0%/69.0% |

Turning radius according to ISO 7457:

27' 10.6" (8500 mm)

A = 13' 9.9" (4215 mm) B = 29' 3.2" (8920 mm) C = 19' 5.9" (5940 mm)





Standard & Optional Equipment

Standard

Optional

Engine

| Emissions (EPA), T4f | - |
|---|---|
| High-pressure common-rail (HPCR) | - |
| Cooled exhaust gas recirculation (CEGR) | |
| Selective catalyst reduction (SCR) | |
| Diesel exhaust fluid (DEF) | |
| Fuel filter with water separator | |
| Coolant recovery tank | |
| Dual element dry-type air filter with evacuator | |
| Electronic engine control (ECU) | |
| Cool-down mode | |
| Diesel engine heater | • |
| | |

Hydraulic

| Variable displacement axial piston pump | • |
|---|---|
| Cooling fan – hydraulic, variable speed | |
| Emergency steering pump (ground driven) | |

Electrical

| System voltage – 24 V | - |
|---|---|
| Alternator – 24 V, 100 A | - |
| 2 x 12 V batteries, 140 AH reserve capacity | - |
| Electronic fuses | - |
| Lights, work (halogen): front & rear | • |
| Lights, work (LED): front & rear | • |
| Lights, stop, tail & direction indicators | - |
| Rotating beacon | • |
| Hour meter | - |
| Rearview camera | - |
| Laptop service port | - |
| Self-diagnostics system | - |
| Emergency shutdown switch | |

Controls

| | Controls | |
|--|--|---|
| | Adjustable steering column - Tilting - Telescoping | • |
| | Throttle pedal (accelerator) | |
| | Brake pedal | |
| | Gear selector ("trip-tonic") | |
| | Electronic body hoist lever | • |
| | Adjustable hydrodynamic retarder lever | • |
| | Switches, console-mounted - Key switch - Parking brake | • |
| | But the state of t | |

Buttons & indicator lights, keypad

- Parking lights
 Main lights
 Main lights
 Engine pre-heater
 Hazard lights
 Rear axle differential lock
 Inter-axle differential lock
- Retarder control Filter heater
- Heated seat Heated mirrors Rear work lights Rotating beacon

- Work lights Interior cabin light

Cabin

| Steel, all-weather & sound-suppressed | |
|---|---|
| ROPS (ISO 3471) | - |
| FOPS (ISO 3449) | |
| Front window with wiper/washer | |
| Rear window | |
| Tinted safety glass | - |
| Visor, retractable | |
| Adjustable sliding side window | |
| Lockable doors | |
| Seat - Heated - Air suspension - 2" (51 mm) seat belt - Adjustable height & recline - Adjustable fore/aft - Adjustable armrests | |
| Instructor's seat, folding | |
| Storage for operator's manuals | - |
| Mirrors (2), exterior front-mounted | - |
| Mirrors (2), exterior side-mounted, adjustable & heated | • |
| Fully adjustable HVAC | • |
| Multi-function LCD display | • |
| Cigarette lighter | • |
| AM/FM stereo & Bluetooth® | • |
| Speakers (2) | • |
| Antenna | • |
| Space for cooler box | • |
| Storage | • |
| Power socket, 12 V, USB power outlets (2) | • |
| Cup holder | • |
| Interior light | • |
| Guard, rear window | • |
| Cab tiliting system | • |
| | |

Display Monitor & Warnings

| Bu: | zzer |
|-----|------|
| | |

- Brake system - Parking brake

- Gauges Fuel level DEF level
- Engine coolant temperature Transmission oil temperature Retarder oil temperature
- Payload meter Gradient meter
- Engine rpm
- Warning & indicator lights Warning & indicator lights
 - Seat belt
 - Error code
 - SCR warning
 - Check engine
 - Engine oil pressure
 - Engine pre-heat engaged
 - Radiator coolant level
 - & temperature
 - Air filter
 - Engl pool

- Lights (high, main, work, beacon) Payload indicator

- Battery voltage - Digital clock - Trip meter

- Hour meter - Fuel consumption

- Direction signal
 Emergency steering
 Transmission mode
 Transmission lock-up
 Transmission oil temp
 Transmission gear indicator
 Retarder oil temperature
 Retarder brake
 Lubrication system

- Speedometer - Transmission gear indicator

- Lubrication system
- Body down Parking brake indicator
- Payload indicator, external

Frame & Suspension

| Articulation hinge | - |
|--|---|
| Steering cylinder, double-acting (2) | - |
| Turning ring, forward-mounted | - |
| Towing hook, front & rear | - |
| Sloping rear frame | - |
| Front – semi-independent, self-leveling hydro-gas suspension | - |
| Rear – free-swinging tandem housing | - |
| Tires, radial 29.5 R25 | - |
| Tires, radial 29.5 R25 (various brands) | • |
| Tires, radial 875/65R25 (various brands) | • |
| | |

Driveline

| Transmission, automatic – electronic shift control | • |
|---|---|
| Torque converter lock-up clutch | • |
| 6x6 drive, full-time | • |
| Front axle transverse differential: limited-slip diff lock with 45% locking ratio | • |
| Rear axle transverse differential (1): limited-slip diff lock with 40% locking ratio | • |
| Inter-axle longitudinal differential - Torque-proportioning differential: integrated into ZF transmission - Torque distribution: 1/3 to front axle, 2/3 to rear axle, 100% lockable | |
| Tandem housing – gear driven, free-swinging | • |
| Automatic hydrodynamic transmission retarder, 4 settings | • |
| Braking system, dual circuit | • |
| Hydraulic, wet multiple discs – 4 (front & mid wheels) | • |
| Parking brake, spring-applied hydraulic release – driveshaft mounted | • |

Body

| Body, high-tensile Hb400 steel | • |
|--|---|
| Lifting cylinder, double-acting (2) – cushion, extending | |
| Tailgate, scissor type | • |
| Spill guard on front of body | • |
| Bed heating system | • |
| Body lining, standard | • |
| | |

Other

| Other | | |
|-------|---|---|
| | Automatic lubrication system | - |
| | Handrails & service steps | • |
| | Skid-resistant steps & service platforms | - |
| | Body lift support | - |
| | Fire extinguisher | • |
| | First aid kit | • |
| | Manuals - Operation & Maintenance - AEM Safety Manual | • |
| | MY DEVELON (telematics) | - |
| | Vandalism protection - Lockable panels - Lockable fluid fill points | • |
| | Mud flaps | |

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