

# Volvo A35G, A40G in detail

**Engine**  
13 liter, 6-cylinder straight turbocharged diesel engine with 4 valves per cylinder, overhead camshaft and electronically controlled unit injectors. The engine has wet replaceable cylinder liners and replaceable valve guides and valve seats.

|  |       | A35G  | A40G  |
|--|-------|-------|-------|
| Engine model                             | Volvo | D13F  | D13F  |
| Max power - SAE J1995 Gross              | kW    | 336   | 350   |
|  | hp    | 457   | 476   |
| at engine speed                          | r/min | 1 900 | 1 900 |
| Flywheel power - ISO 9249, SAE J1349 Net | kW    | 333   | 347   |
|  | hp    | 453   | 472   |
| at engine speed                          | r/min | 1 900 | 1 900 |
| Max torque - SAE J1995 Gross             | Nm    | 2 407 | 2 525 |
| Max torque - ISO 9249, SAE J1349 Net     | Nm    | 2 386 | 2 500 |
| at engine speed                          | r/min | 1 200 | 1 050 |
| Displacement                             | l     | 12.8  | 12.8  |

## 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.

|                  |      | A35G      | A40G      |
|------------------|------|-----------|-----------|
| Voltage          | V    | 24        | 24        |
| Battery          | V    | 2x12      | 2x12      |
| Battery capacity | Ah   | 2x170     | 2x170     |
| Alternator       | kW/A | 3.396/120 | 3.396/120 |
| Starter motor    | kW   | 9         | 9         |

## Drivetrain

Torque converter with built-in lock-up function.  
**Transmission:** Fully automatic Volvo PowerTronic planetary transmission with nine forward gears and three reverse gears. The transmission has the ability to skip gears for fast and accurate gear selection.  
**Dropbox:** Volvo-developed, in-line design with high ground clearance and 100% longitudinal "dog clutch" type differential lock.  
**Axles:** Heavy duty, purpose built Volvo design with fully floating axle shafts, planetary type hub reductions and 100% dog clutch type diff-lock. Automatic traction control system (ATC).

|                  |       | A35G    | A40G    |
|------------------|-------|---------|---------|
| Torque converter |       | 2.1:1   | 2.1:1   |
| Transmission     | Volvo | PT 2529 | PT 2529 |
| Dropbox          | Volvo | IL2 ATC | IL2 ATC |
| Axles            | Volvo | ARB H35 | ARB H40 |

## Brake system

Fully hydraulic, wet multiple disc brakes with enclosed, forced oil-cooled multiple discs on all wheels. Two circuit brake system. Complies with ISO 3450 at total machine weight.

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

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

**Retarder:** Service brake retarder function and Volvo Engine Brake (VEB).

## Steering System

Hydro-mechanical articulated steering, self compensating design. Two double-acting steering cylinders.

**Steering angle:** 3,4 steering wheel turns lock-to-lock,  $\pm 45^\circ$ .

Steering system, including secondary steering fulfills ISO 5010.

## Chassis

**Frames:** box type, heavy duty. High strength steel, robot welded.

**Rotating hitch:** 100% maintenance free, fully sealed, with permanently greased tapered roller bearings.

## Cab

Mounted on rubber pads. Ergonomically designed. Easy entry and exit. Wide angle forward view.

Operator centrally positioned above the front axle. Adjustable operators seat with retractable seat belt.

Tilt/telescopic steering wheel. Ergonomically positioned controls. Filtered air. Climate control system.

Operator communication system: Contronics.

Large color display, user-friendly and easy-to-understand information, all vital machine functions are constantly monitored.

Instructor seat with seat belt.

Safety: ROPS/FOPS standards approved according to ISO3471, SAE J1040 / ISO3449, SAE J231.

|   |    | A35G | A40G |
|---|----|------|------|
| Sound level in cab (ISO 6396) - L <sub>pA</sub>   | dB | 72   | 72   |
| External sound level (ISO 6395) - L <sub>WA</sub> | dB | 112  | 112  |
| Internal sound level with sound kit: 70 dB(A)     |    |      |      |
| External sound level with sound kit: 110 dB(A)    |    |      |      |



### Hydraulic system

**Pumps:** Four variable displacement piston pumps driven by the flywheel PTO.

Two load-sensing used for steering and tipping and two electrical controlled used for fan, brake cooling and brake power supply.  
One ground-dependent piston pump for secondary steering mounted on the dropbox.

Two return oil filters with magnetic cores provide effective oil filtration.

|                             |     | A35G | A40G |
|-----------------------------|-----|------|------|
| System max working pressure | MPa | 26   | 26   |

### Dumping System

Patented Load and Dump Brake.

Dumping Cylinders: two single stage double acting cylinders.

|                        |   | A35G | A40G |
|------------------------|---|------|------|
| Tipping angle          | ° | 72   | 70   |
| Tipping time with load | s | 12   | 12   |
| Lowering time          | s | 10   | 10   |

### Body

|                        |                   | A35G        | A40G        |
|------------------------|-------------------|-------------|-------------|
| <b>Plate thickness</b> |                   |             |             |
| Front                  | mm                | 8           | 8           |
| Sides                  | mm                | 11          | 11          |
| Bottom                 | mm                | 14          | 14          |
| Chute                  | mm                | 16          | 16          |
| <b>Material</b>        |                   | HB450 steel | HB450 steel |
| Yield strength         | N/mm <sup>2</sup> | 1 150       | 1 150       |
| Tensile strength       | N/mm <sup>2</sup> | 1 350       | 1 350       |

### Load Capacity

|                               |                | A35G   | A40G   |
|-------------------------------|----------------|--------|--------|
| <b>Standard Body</b>          |                |        |        |
| Load capacity                 | kg             | 34 500 | 39 000 |
| Body, struck                  | m <sup>3</sup> | 16.6   | 18.4   |
| Body, heaped 2:1              | m <sup>3</sup> | 21.2   | 24     |
| <b>With overhung tailgate</b> |                |        |        |
| Body, struck                  | m <sup>3</sup> | 17     | 18.8   |
| Body, heaped 2:1              | m <sup>3</sup> | 22.1   | 24.7   |

### Suspension

**Front suspension:** Three point suspension consisting of a-stay fitted to the frame structure by a spherical rubber bushing, shock absorbers with accumulators and cross stays.

**Rear suspension:** 3-point bogie beam suspension consisting of a straddle-mounted bogie beam with maintenance free rubber bearings, flexible rubber pads, cross stays and a-stay.



# Specifications

## REFILL CAPACITIES

|                      |   | A35G  | A40G  |
|----------------------|---|-------|-------|
| Crankcase            | l | 51    | 51    |
| Fuel tank            | l | 480   | 480   |
| Cooling system       | l | 44    | 44    |
| Brake cooling system | l | 188   | 188   |
| Transmission         | l | 43    | 43    |
| Dropbox              | l | 9     | 9     |
| Axles, front/bogie   | l | 25/51 | 26/53 |
| Hydraulic tank       | l | 174   | 174   |

## OPERATING WEIGHT UNLOADED

|         |    | A35G     | A40G      |
|---------|----|----------|-----------|
| Tires   |    | 26.5R25* | 29.5R25** |
| Front   | kg | 15 700   | 16 100    |
| Rear    | kg | 13 600   | 14 600    |
| Total   | kg | 29 300   | 30 700    |
| Payload | kg | 34 500   | 39 000    |

Operating weight includes all fluids and operator

\*) A35G with tires 775/65R25, add 200 kg /axle

\*\*\*) A40G with tires 875/65R25, add 300 kg /axle

## SPEED

|                |      | A35G | A40G |
|----------------|------|------|------|
| <b>Forward</b> |      |      |      |
| 1              | km/h | 5.9  | 5.8  |
| 2              | km/h | 8.6  | 8.5  |
| 3              | km/h | 10.3 | 10.4 |
| 4              | km/h | 15.2 | 15   |
| 5              | km/h | 21.9 | 21.6 |
| 6              | km/h | 27.7 | 27.3 |
| 7              | km/h | 36.6 | 36.1 |
| 8              | km/h | 48.5 | 47.8 |
| 9              | km/h | 57   | 57   |
| <b>Reverse</b> |      |      |      |
| 1              | km/h | 6.6  | 6.5  |
| 2              | km/h | 9.5  | 9.4  |
| 3              | km/h | 18   | 18   |

## TOTAL WEIGHT

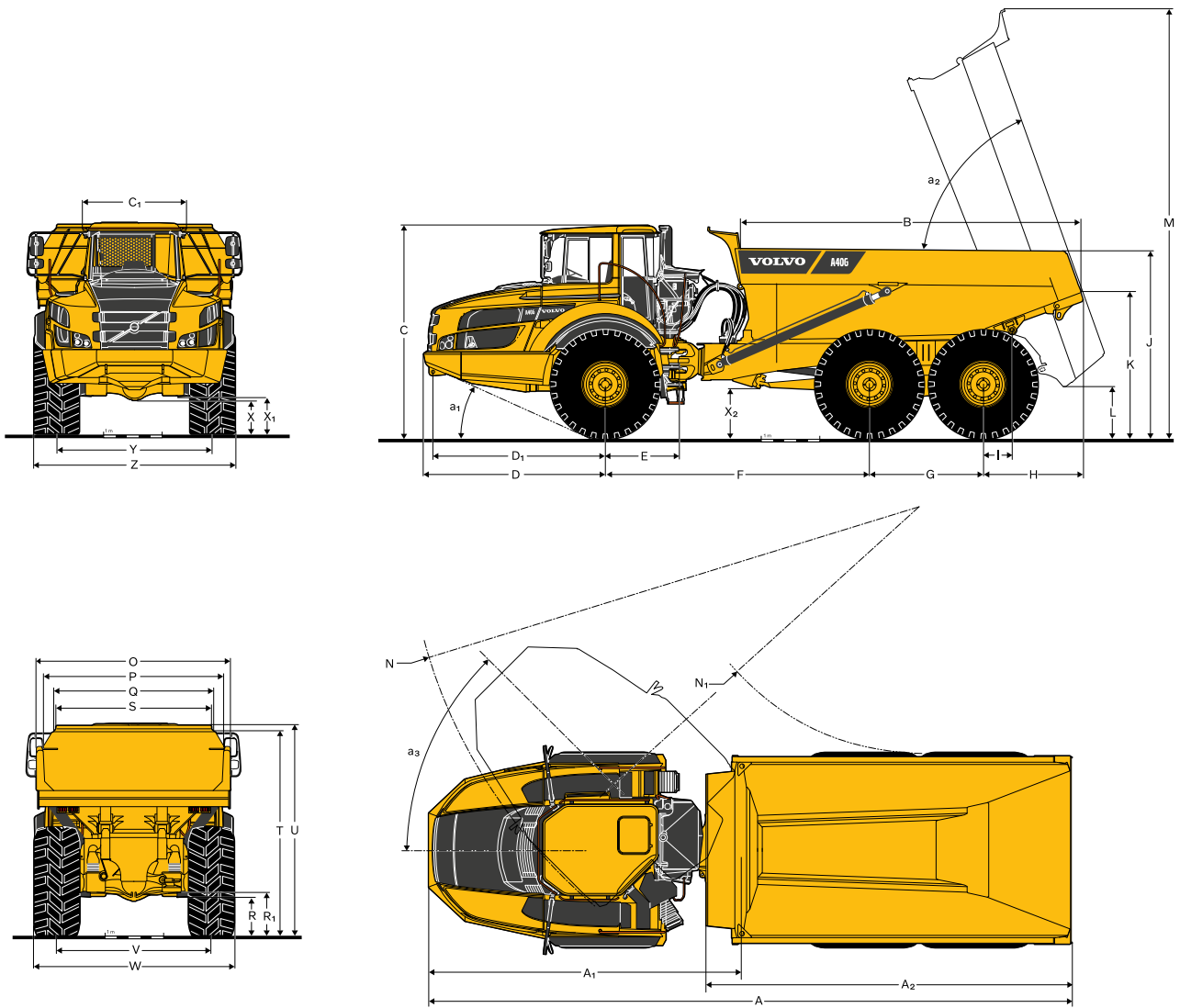
|       |    | A35G     | A40G      |
|-------|----|----------|-----------|
| Tires |    | 26.5R25* | 29.5R25** |
| Front | kg | 19 200   | 20 450    |
| Rear  | kg | 44 600   | 49 250    |
| Total | kg | 63 800   | 69 700    |

\*) A35G with tires 775/65R25, add 200 kg /axle

\*\*\*) A40G with tires 875/65R25, add 300 kg /axle

## GROUND PRESSURE

|                 |     | A35G    | A40G    | A35G      | A40G      |
|-----------------|-----|---------|---------|-----------|-----------|
| Tires           |     | 26.5R25 | 29.5R25 | 775/65R25 | 875/65R25 |
| <b>Unloaded</b> |     |         |         |           |           |
| Front           | kPa | 132     | 111     | 115       | 98        |
| Rear            | kPa | 54      | 47      | 48        | 42        |
| <b>Loaded</b>   |     |         |         |           |           |
| Front           | kPa | 158     | 139     | 138       | 121       |
| Rear            | kPa | 183     | 167     | 160       | 146       |



**DIMENSIONS**

| Pos            | Unit | A35G   | A40G   |
|----------------|------|--------|--------|
| A              | mm   | 11 180 | 11 263 |
| A <sub>1</sub> | mm   | 5 476  | 5 476  |
| A <sub>2</sub> | mm   | 6 241  | 6 404  |
| B              | mm   | 5 568  | 5 844  |
| C              | mm   | 3 547  | 3 599  |
| C <sub>1</sub> | mm   | 1 772  | 1 772  |
| D              | mm   | 3 100  | 3 100  |
| D <sub>1</sub> | mm   | 2 942  | 2 942  |
| E              | mm   | 1 277  | 1 277  |
| F              | mm   | 4 578  | 4 518  |
| G              | mm   | 1 820  | 1 940  |
| H              | mm   | 1 683  | 1 706  |
| I              | mm   | 650    | 495    |
| J              | mm   | 3 014  | 3 132  |
| K              | mm   | 2 304  | 2 435  |
| L              | mm   | 890    | 822    |
| M              | mm   | 7 236  | 7 265  |
| N              | mm   | 8 866  | 8 957  |
| N <sub>1</sub> | mm   | 4 416  | 4 327  |
| O              | mm   | 3 216  | 3 430  |

**DIMENSIONS**

| Pos            | Unit | A35G  | A40G  |
|----------------|------|-------|-------|
| P              | mm   | 2 902 | 3 118 |
| Q              | mm   | 2 553 | 2 820 |
| R              | mm   | 564   | 613   |
| R <sub>1</sub> | mm   | 652   | 701   |
| S              | mm   | 2 423 | 2 651 |
| T              | mm   | 3 382 | 3 427 |
| U              | mm   | 3 498 | 3 546 |
| V              | mm   | 2 534 | 2 636 |
| W              | mm   | 3 221 | 3 403 |
| X              | mm   | 500   | 553   |
| X <sub>1</sub> | mm   | 592   | 645   |
| X <sub>2</sub> | mm   | 738   | 788   |
| Y              | mm   | 2 534 | 2 636 |
| Z              | mm   | 3 221 | 3 403 |
| a <sub>1</sub> | °    | 23,6  | 24,3  |
| a <sub>2</sub> | °    | 72    | 70    |
| a <sub>3</sub> | °    | 45    | 45    |

A35G: Unloaded machine with 26.5R25

A40G: Unloaded machine with 29.5R25

# Equipment

## STANDARD EQUIPMENT

|   | A35G | A40G |
|---|------|------|
| <b>Engine</b>   |      |      |
| Direct injected, electronically controlled, turbocharged, intercooled | •    | •    |
| Grouped oil filters   | •    | •    |
| Preheater for easier cold starts                                      | •    | •    |
| VEB (exhaust retarder EPG + compression brake)                        | •    | •    |
| <b>Tires</b>  |      |      |
| 26.5R25   | •    | –    |
| 29.5R25   | –    | •    |
| <b>Drivetrain</b>   |      |      |
| 6x4 and 6x6 automatically engaged drive modes                         | •    | •    |
| Dog clutch type 100% diff-locks in all axles                          | •    | •    |
| Full automatic transmission   | •    | •    |
| Dropbox with longitudinal diff-lock                                   | •    | •    |
| Torque converter with automatic lock-up                               | •    | •    |
| <b>Electrical System</b>  |      |      |
| 120 A alternator  | •    | •    |
| Battery disconnect switch   | •    | •    |
| Extra 24 V socket for lunch cooler                                    | •    | •    |
| Lights:   | •    | •    |
| Back-up light   | •    | •    |
| Brake lights  | •    | •    |
| Cab lighting  | •    | •    |
| Direction indicators  | •    | •    |
| Headlights  | •    | •    |
| Instrument lighting   | •    | •    |
| Parking lights  | •    | •    |
| Rear lights   | •    | •    |
| <b>Brake system</b>   |      |      |
| Hill assist   | •    | •    |
| Load & Dump Brake   | •    | •    |
| Retarder pedal  | •    | •    |
| Parking brake on propeller shaft                                      | •    | •    |
| Two circuit, fully hydraulic, wet discs on all axles                  | •    | •    |
| <b>Body</b>   |      |      |
| Body prepared for exhaust heating and optional equipment              | •    | •    |
| <b>Safety</b>   |      |      |
| Anti-slip steps and platforms   | •    | •    |
| Dump body lock  | •    | •    |
| Handrails on steps and platforms                                      | •    | •    |
| Hazard lights   | •    | •    |
| Horn  | •    | •    |
| Protective grill for cab rear window                                  | •    | •    |
| Rear-view mirrors   | •    | •    |
| Retractable 3-inch safety belt  | •    | •    |
| ROPS/ FOPS - certified cab  | •    | •    |
| Secondary steering  | •    | •    |
| Steering joint lock   | •    | •    |
| Windshield washers  | •    | •    |
| Windshield wipers with interval function                              | •    | •    |
| Dump support system   | •    | •    |

## STANDARD EQUIPMENT

|  | A35G | A40G |
|--|------|------|
| <b>Comfort</b>                                     |      |      |
| ACC control panel                                  | •    | •    |
| Ashtray  | •    | •    |
| Cab heater with filtered fresh air and defroster   | •    | •    |
| Can holder /storage tray                           | •    | •    |
| Instructor seat with seat belt                     | •    | •    |
| Overhead console for radio                         | •    | •    |
| Sliding window                                     | •    | •    |
| Space for lunch cooler                             | •    | •    |
| Storage box  | •    | •    |
| Sun visor  | •    | •    |
| Tilt/telescopic steering wheel                     | •    | •    |
| Tinted glass                                       | •    | •    |
| <b>Operator information interface</b>              |      |      |
| Gauges:  |      |      |
| Brake pressure                                     | •    | •    |
| Fuel   | •    | •    |
| Speedometer  | •    | •    |
| Tachometer   | •    | •    |
| Wet disc brakes cooling oil temperature            | •    | •    |
| <b>Warning lights grouped and easy to read</b>     |      |      |
| Central warning (3 levels) for all vital functions | •    | •    |
| <b>Central positioned information display</b>      |      |      |
| Automatic pre-start checks                         | •    | •    |
| Clock  | •    | •    |
| Hour meter   | •    | •    |
| Operational information, easy-to-navigate menu     | •    | •    |
| Troubleshooting diagnostics                        | •    | •    |
| <b>Exterior</b>                                    |      |      |
| Front mudguard wideners and rear mudflaps          | •    | •    |
| <b>Service and maintenance</b>                     |      |      |
| Electrical engine hood                             | •    | •    |
| Machine Tracking Information System MATRIS         | •    | •    |
| Service platform integrated in the front grill     | •    | •    |
| Tool box   | •    | •    |

## OPTIONAL EQUIPMENT

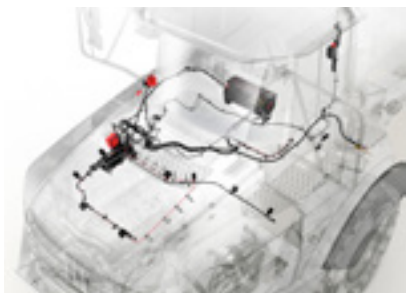
|  | A35G | A40G |
|--|------|------|
| <b>Engine</b>                            |      |      |
| Air pre-cleaner, cyclone type            | •    | •    |
| Air pre-cleaner, oil-bath type           | •    | •    |
| Air filter, heavy duty, EON              | •    | •    |
| Engine heater, 120 V, USA                | •    | •    |
| Engine heater, 240 V                     | •    | •    |
| Engine heater, diesel (Eberspächer)      | •    | •    |
| Engine heater, diesel with separate tank | •    | •    |
| Engine auto shutdown                     | •    | •    |
| Engine shutdown timer                    | •    | •    |
| External emergency engine stop           | •    | •    |
| Fuel filter, extra                       | •    | •    |
| High engine idle speed                   | •    | •    |

| OPTIONAL EQUIPMENT                           |      |      |
|--|------|------|
|  | A35G | A40G |
| <b>Tires</b>                                 |      |      |
| 775/65R25                                    | •    | –    |
| 875/65R25                                    | –    | •    |
| <b>Electrical System</b>                     |      |      |
| Headlights, LED                              | •    | •    |
| Warning beacon, LED                          | •    | •    |
| Working lights, halogen                      | •    | •    |
| Working lights, LED                          | •    | •    |
| Entrance light                               | •    | •    |
| Anti-theft system (pin code)                 | •    | •    |
| Rear view camera                             | •    | •    |
| Reverse alarm                                | •    | •    |
| CAN-BUS interface, extra                     | •    | •    |
| <b>Cab</b>                                   |      |      |
| Noise reduction kit (fulfils 2000/14/EC)     | •    | •    |
| Anchorage, operator's manual                 | •    | •    |
| Cab heating/ventilation timer                | •    | •    |
| Cable kit, for cab heater 240 V              | •    | •    |
| HEPA cab air filter                          | •    | •    |
| Bluetooth radio kit                          | •    | •    |
| Rear view mirrors, adjustable, el.heated     | •    | •    |
| Seat belt XXL, non-retractable               | •    | •    |
| Sun blinds, side windows                     | •    | •    |
| Universal key                                | •    | •    |
| Air suspended, heated, fully adjustable seat | •    | •    |
| Armrest for operator seat                    | •    | •    |
| Headrest for operator seat                   | •    | •    |
| Low profile cab                              | •    | •    |

| OPTIONAL EQUIPMENT                            |      |      |
|---|------|------|
|   | A35G | A40G |
| <b>Body</b>                                   |      |      |
| Body exhaust heating                          | •    | •    |
| Front spillguard, extra                       | •    | •    |
| Side extension, 200 mm                        | •    | •    |
| Side extension, light material                | •    | •    |
| Tailgate, overhung, linkage-operated          | •    | •    |
| Tailgate, overhung, wire-operated             | •    | •    |
| Tailgate, underhung                           | •    | •    |
| Wear plates, 450 HB                           | •    | •    |
| Underground body                              | •    | •    |
| <b>Safety</b>                                 |      |      |
| Fire suppression system                       | •    | •    |
| Warning triangle                              | •    | •    |
| First aid kit and fire extinguisher           | •    | •    |
| Fire extinguisher                             | •    | •    |
| Wheel chocks                                  | •    | •    |
| <b>Service and maintenance</b>                |      |      |
| Lube system, standard machine                 | •    | •    |
| Lube system, tailgate                         | •    | •    |
| Lubrication hose, ground level greasing       | •    | •    |
| Tool kit                                      | •    | •    |
| <b>Other</b>                                  |      |      |
| Siberian kit -40°C                            | •    | •    |
| Arctic oil kit                                | •    | •    |
| CareTrack                                     | •    | •    |
| Fast fuelling system                          | •    | •    |
| Jump start connector, NATO -type              | •    | •    |
| Frame extension                               | •    | •    |
| Haul Assist - On-Board Weighing               | •    | •    |
| Haul Assist - Tire Pressure Monitoring System | •    | •    |

## SELECTION OF VOLVO OPTIONAL EQUIPMENT

Fire suppression system



Fast fuelling



Heavy duty air filter



Exhaust body heating



LED lighting



Wear plates



Not all products are available in all markets. Under our policy of continuous 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.

# Solutions for you

Our industry leading machines are just the start of your relationship with Volvo. As your partner, we have developed an extensive range of additional solutions to help you improve uptime, boost productivity and reduce costs.

Our portfolio of products and services is designed to complement your machine's performance and boost your profitability. Simply put, we offer some of the best guarantees, warranties and technological solutions in the industry today. Below are just some examples. Talk to your dealer to find out and discuss the right fit for you!



## **Get the most from your machine**

While reliable and efficient machines of course play a vital role in reducing costs, enhancing safety and maximizing productivity, it is ultimately the performance of the operator that really makes the difference. We offer a range of training initiatives to help operators unlock the full capability of their Volvo Articulated Hauler.

## **Connected to Uptime**

Maximize machine uptime and reduce repair costs with the CareTrack telematic system. Choose to keep track of your machine yourself or let us take care of it with ActiveCare. Our Volvo Uptime Center will provide 24/7 machine monitoring, supplying weekly reports and notifying you should preventive maintenance action be required.