

**SANDVIK**

# TORO™ TH320 UNDERGROUND TRUCK



# RELIABLE AND PRODUCTIVE

## DESIGNED FOR THE UNDERGROUND

Toro™ TH320 is a reliable, hard-working dump truck designed especially for underground conditions. With its hardy structure, compact size and fit-for-purpose components, the truck is tailored to meet productivity targets in challenging environments. An improved front approach angle helps to reduce ground impacts and bumps when the road is rough. New heavy-duty axles use limited slip differentials to maintain traction, improve availability and reduces total costs of ownership.

## HIGH PAYLOAD CAPACITY AND RAMP SPEED

The equipment's low weight, 20 tonne payload capacity and high ramp speed enable better productivity and shorter cycle times. The standard Tier 3 engine with a gross power of 235 kW makes Toro™ TH320 a fast and powerful mining truck. High engine peak torque and torque rise allow less downshifting and better acceleration, while the new transmission automatic gear shifting and torque converter lock-up ensure fast speeds. High power and low engine torque rpm improve fuel economy and reduce noise.



**FUEL EFFICIENT TIER 3 ENGINE FOR HIGH ALTITUDES**

A robust 235 kW Tier 3 Volvo engine with catalytic purifier and muffler delivers extremely long engine lifetime in underground mining conditions. This fuel efficient 8 litre engine with a high-tech injection system contributes to an efficient combustion and low fuel consumption. Further, the engine is calibrated for use in high altitude conditions to maintain performance, low emissions and reliability.

**ACHIEVE FULL CAPACITY WITH A RANGE OF BOX OPTIONS**

Sandvik dump boxes are already designed with extra volume when selecting the right box for the broken material density. A 90% fill factor is used in the box

selection, to ensure that the truck can be loaded to its full 20 tonne capacity and reduced spillage during tramming. The reinforced steel structure uses wear resistant steel for extended box lifetime. The wide range of box options includes an ejector box for backfilling and unloading in areas of restricted dump height. Further, a tailgate option which is available for all box sizes improves productivity and reduces spillage.

**MAXIMIZING PRODUCTIVITY**

My Sandvik Digital Service Solutions are designed to help you maximize your productivity, operational efficiency and safety. Once activated, the Knowledge Box™ collects equipment data into easy-to-use insights about your fleet's performance. The monitoring data is available from the truck through a USB port.



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# EASE OF MAINTENANCE AND SERVICEABILITY

Toro™ TH320 is designed for ground level daily maintenance. Standard features improving safety include lockable main switch, articulation lock and box maintenance support, among others. Sandvik Intelligent Control System monitors the equipment health and provides early warnings. The control system user interface is available in multiple different languages, according to the customer needs.



## CORRECT CHOICE OF LUBRICANTS

The right oil can make a major difference in equipment lifetime. Low-quality fluids can reduce productivity and shorten equipment life. All oils in the Sandvik range are specifically designed and carefully tested, paying close attention to extreme operating conditions. As a result, Sandvik Performance Fluids are long lasting, ideal for different climate conditions and most importantly, formulated based on the specific needs of your Sandvik truck. They ensure increased reliability, higher availability and reduced breakdown risk.

## OPTIMIZED GREASE CONSUMPTION

The standard automatic central lubrication system optimizes grease consumption and extends the life of the bushes and bearings. Activated by Sandvik Intelligent Control System when the parking brake is released, hard to reach areas are well lubricated and service time is reduced.

## SANDVIK MAINTENANCE KITS

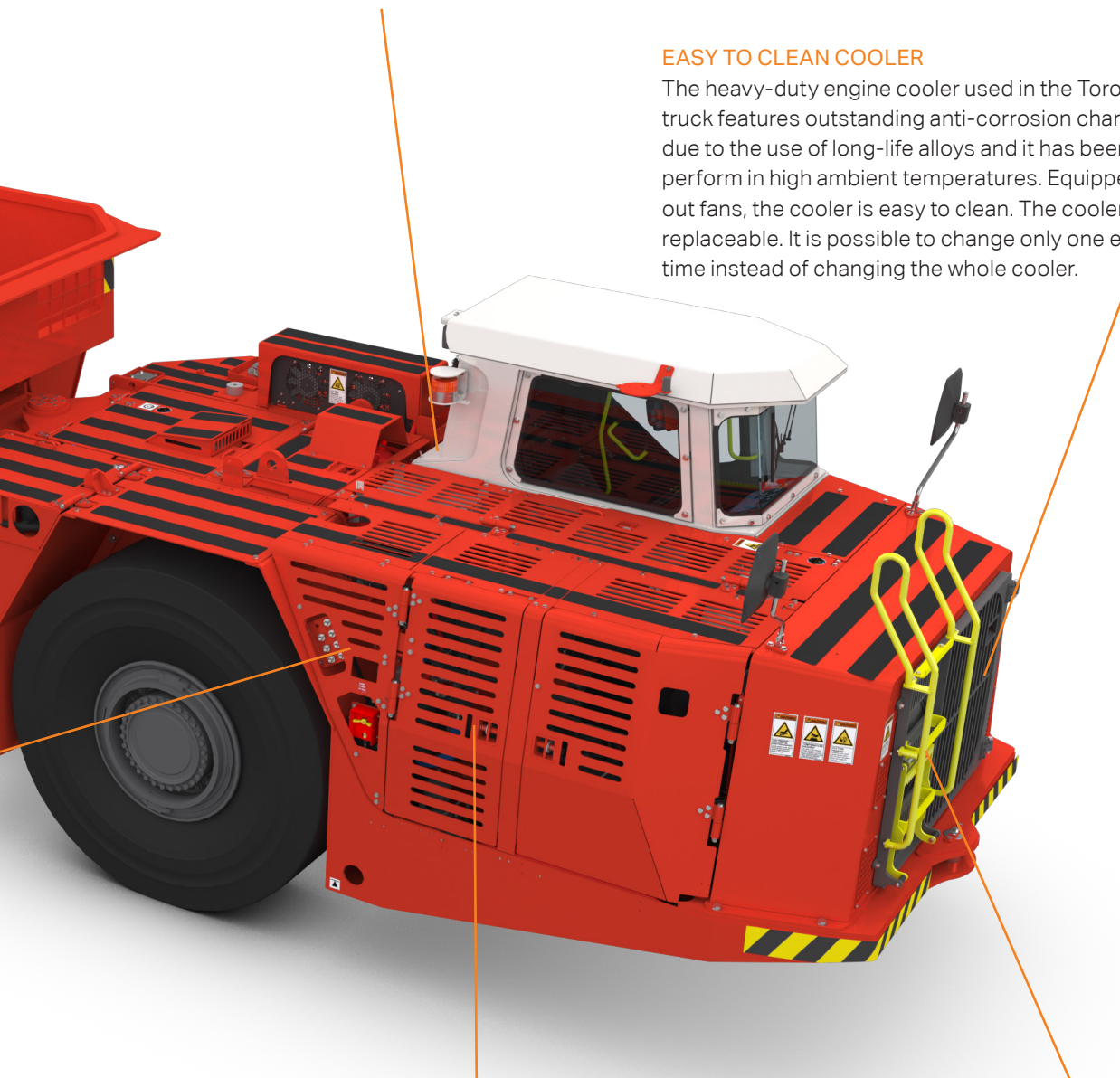
Sandvik maintenance kits are made to protect your Sandvik machine and to allow you to meet peak performance levels. The kit components are selected according to our recommended service intervals to ensure trouble-free and economical operations.

### ELECTRICS FOR THE UNDERGROUND

To improve safety and reliability of the truck electrics, the new Toro™ TH320 main fuse and battery have been relocated to a higher location which offers better protection from water and mud.

### EASY TO CLEAN COOLER

The heavy-duty engine cooler used in the Toro™ TH320 truck features outstanding anti-corrosion characteristics due to the use of long-life alloys and it has been designed to perform in high ambient temperatures. Equipped with swing out fans, the cooler is easy to clean. The cooler elements are replaceable. It is possible to change only one element at a time instead of changing the whole cooler.



### GROUND LEVEL DAILY SERVICE

Toro™ TH320 is designed for daily ground level service with smart placement of key service areas and maintenance accesses. All covers and hatches can be opened without any special tools. An efficient engine filter is placed within the frame for impact protection and it utilizes an ejector valve system for increased filter lifetime. An optional Wiggins fast filling system for fuel and oil eliminates spills and increases equipment availability by reducing fueling time up to 80%.

### NEW ACCESS WAY

For getting to the top of the equipment, the totally new access system provides a steady grip with 3-point contact high contrast handles and anti-slip steps. Top covers are fitted with anti-slip tapes to reduce the risk of slipping.

# SAFETY AND OPERATOR ENVIRONMENT

Toro™ TH320 is available with a robust Roll Over Protective Structure (ROPS) and Falling Objects Protective Structure (FOPS) certified open canopy or closed cabin, both protecting the operator in case of rolling over or falling objects. The closed cabin is air-conditioned and noise resistant. The seat is covered with dust resistant upholstery materials. It also includes laminated safety glass windows, three-point contact handles, anti-slip steps and an emergency exit. The cabin door includes a door lock and latch mechanism with an interlock switch which automatically applies brakes when the door is opened.

Further, neutral brake is a standard feature in the Toro™ TH320 truck.





#### ADJUSTABLE ARMRESTS AND LOW FREQUENCY SUSPENSION SEAT

This truck is fitted with an adjustable low frequency suspension seat to perfectly match the operator weight, with two-point seat belt and padded armrests as a standard. Small storage boxes are located in the cabin/canopy for the miner's gear. A place for a water bottle has also been added. In addition, the cabin/canopy is mounted on bushings to the truck frame to reduce whole body vibration. The well-balanced engine from Volvo Penta delivers smooth operation and low noise levels.

#### TOUCH SCREEN COLOR DISPLAY

A 7" color display with clear symbols and advanced touch screen functionality brings engine alarms to the display, giving the operator more time to keep eyes on the road. The Sandvik Intelligent Control System monitors and warns the operator before failures occur, preventing severe damage and potential loss of production.

#### IMPROVED VISIBILITY

To improve operator visibility, the truck is equipped with a reversing camera as a standard. Naturally, adjustable high-power LED lights are in the standard configuration on every Toro™ TH320, and the lights

can be equipped with additional cover grills to provide protection against hits and rocks. Red and green directional lights are available as options to indicate direction of travel.

#### FIRE SAFETY

Significant efforts have been made to achieve top-level fire safety in Toro™ TH320. These include e.g. isolation of combustibles and ignition sources, heat insulation on exhaust manifold and turbo, and insulated exhaust pipe. For fire suppression, Eclipse™ from Sandvik is available as an option. The Eclipse™ equipped with Sustain fire suppression system agent is a sustainable choice, as it is the world's first fluorine-free fire suppression liquid for mobile equipment. For environmental conditions where the temperature may drop under zero, the Eclipse™ Extreme provides fire protection.

#### PROXIMITY DETECTION SYSTEM INTERFACE

A Proximity Detection System (PDS) interface option is also available on Toro™ TH320 for mines to interface with their site PDS system. The PDS interface offers easy installation and connection to the Sandvik Intelligent Control System with the capability to slow down and stop the truck with a signal from a PDS system.

# LOW COST OF OWNERSHIP



## ROBUST AND RELIABLE POWER TRAIN

Toro™ TH320 is equipped with new heavy-duty axles to improve the truck availability, extend axle lifetime and reduce total costs of ownership.

## SUPERIOR BRAKING POWER

As with all Sandvik trucks, Toro™ TH320 is equipped with spring applied hydraulic release brakes for safer braking. Top speeds can be reduced by an optional gear limiting to improve safety in narrow tunnels and rough roads.

## FUEL EFFICIENT TIER 3 ENGINE FOR HIGH ALTITUDES

A robust 235 kW Tier 3 Volvo engine with catalytic purifier and muffler delivers a long engine life in underground mining conditions. The fuel efficient 8 liter engine is also calibrated for use in high altitude conditions to maintain performance, low emissions and reliability. The heavy-duty efficient aluminum cooler is easy to clean, helping to reduce total cost of ownership. The standard engine brake provides better control of the vehicle speed downhill, minimizes brake and transmission overheating and brake wear.

## SIMPLE AND RELIABLE HYDRAULICS

The proven hydraulic system with fixed displacement pumps provides pressure and flow, enabling fast and efficient unloading. The hydraulic system is simple and reliable, contributing to ease of maintenance and lower total cost of ownership. An electric filling pump for hydraulic oil is available as an option to quickly fill the hydraulic tank through a filter ensuring clean oil to protect the hydraulic system components.

## EFFICIENT COOLING FOR INCREASED PERFORMANCE

Separate brake, hydraulic and transmission cooling provide increased performance in hot conditions underground. A more efficient cooling circuit leads to lower oil temperatures, reducing stress on the system, extending component lifetimes, and minimizing oil leaks.

## FEA OPTIMISED FRAMES

Toro™ TH320 welded steel structures used in the frame provide strong resistance to shock loads. They are optimized to reduce stresses and extend frame lifetime. The frames are computer designed using Finite Element Analysis (FEA) and made from high strength structural steel.



# SANDVIK 365 PARTS AND SERVICES

## PROUDLY KEEPING YOU ON TRACK!

Sandvik 365 Parts & Services offer a variety of possibilities to enhance your Sandvik truck's performance. As an OEM, we provide the best-suited choices to preserve your machine's high performance throughout its lifetime. These consist of highly skilled service specialists supporting you 365 days a year, all using Sandvik Genuine parts and components complemented by a range of robust tools. In addition, you get to enjoy the benefits of advanced digital services and a global infrastructure dedicated to keeping your Sandvik fleet on track.

As your productivity partner, we support your actions to reduce operational risks and total cost of ownership by maximizing uptime and productivity with the right solutions at the right time. With improved uptime and an increase in process efficiency, equipment reliability and availability, you can truly count on your partnership throughout the lifecycle of your Sandvik equipment.

## BENEFIT FROM OUR 365 SOLUTIONS

Our Sandvik 365 Parts & Service solutions will enable your equipment to function safely at peak condition and allow you to achieve the most demanding production targets. Our aftermarket portfolio attends all possible needs throughout your equipment's life cycle, ranging from the most basic and traditional offerings to the most sophisticated ones.

## CHOOSE FROM OUR RANGE OF SERVICE AGREEMENTS

With Sandvik Service Agreements, you can improve productivity and minimize unplanned downtime by making use of our expertise, systems and processes. They can be adapted to the specific level of support you require – helping you proactively manage your fleet and avoid any unexpected surprises.

## MAXIMIZE YOUR PRODUCT LIFETIME WITH SANDVIK 365 REBUILD SOLUTIONS

One of the most effective ways to optimize equipment lifecycle lies in the quality and range of the Sandvik Rebuild Solutions. Planning and executing rebuilds at optimal intervals helps you keep your equipment's operating cost and productivity on track. A rebuild by the manufacturer can optimize your total cost of ownership (TCO) and increase the level of predictability around our fleet lifecycle.

## GAIN PRODUCTIVITY THROUGH CONNECTIVITY

365 My Sandvik Digital Service solutions will provide you with visualization of fleet utilization, productivity, safety and health on a 24/7 basis. The digital service dashboards can be accessed through the My Sandvik customer portal, where you can subscribe to My Sandvik Insight or Productivity. This way, My Sandvik Digital Service Solutions enable you to minimize unplanned downtime and set exact targets for improvement.



# TECHNICAL SPECIFICATION

## TORO™ TH320

Toro™ TH320 is a narrow 20 metric tonne truck designed for small and medium-sized hard rock mines, fitting in a 3 x 3 meter heading. Despite the relatively high payload capacity, this underground truck has the same overall width as most 15-ton trucks on the market. As with all Sandvik underground mining trucks, it is designed to operate fully loaded and at high speeds on long spiral haulage ways with up to 20% gradients.

Available with a standard forward facing, open operator compartment or with an optional forward facing, fully enclosed and air conditioned cabin, Toro™ TH320 offers superior comfort without compromising visibility.

Advantages:

- Narrow size enables operation in 3x3 meter headings
- Excellent payload capacity reduces the need for additional trucks
- Efficient LED lights reduce eye fatigue and risk of collision, while long LED lifetime offers lower cost of ownership compared to halogen lights
- Ground-level daily maintenance for safer service
- Optional ejector box for tight backfill haulage

### CAPACITIES

Maximum payload capacity (SAE heaped 2:1)	20 000 kg
Standard dump box	10.5 m <sup>3</sup>
Dump box range	10.5–14 m <sup>3</sup>

### SPEEDS (LEVEL/LOADED) WITH VOLVO TAD853VE

1st gear	5.3 km/h
2nd gear	9.3 km/h
3rd gear	16.2 km/h
4th gear	28.4 km/h

### DUMP BOX MOTION TIMES & MOVEMENTS

Discharging time	11 sec
Dumping angle	65°

### OPERATING WEIGHTS\*

Total operating weight	22 600 kg
Front axle	16 800 kg
Rear axle	5 800 kg

### LOADED WEIGHTS\*

Total loaded weight	42 600 kg
Front axle	21 100 kg
Rear axle	21 500 kg

\* Unit weight is dependent on the selected options



## OPERATIONAL CONDITIONS AND LIMITS

Environmental temperature	From -20°C to +50°C
Standard operating altitude	With engine Volvo TAD853VE from -1500 m to + 3000 m at 25°C without rated power derate

## REQUIREMENTS AND COMPLIANCE

Compliance with 2006/95/EC Low voltage directive

Compliance with 2004/108/EC Electromagnetic compatibility directive

Design based on EN 1889-1. Machines for underground mines. Mobile machines working underground. Safety. Part 1: Rubber tyred vehicles.

Electrical system based on IEC 60204-1. Safety of machinery – Electrical equipment of machines – Part 1: General requirements

### CONTAINS FLUORINATED GREENHOUSE GASES

(closed cabin option)  
Refrigerant R134a under pressure max 38 bar/550 PSI:  
Filled weight: 1,8 kg  
CO<sub>2</sub>e: 2,574 tons  
GWP: 1430  
Information based on the F Gas Regulation (EU) No 517/2016

## POWER TRAIN

### ENGINE

Diesel engine	Volvo TAD853VE
Engine brake	Yes
Output	235 kw (315 hp) @ 2200 rpm
Torque	1310 Nm @ 1450 rpm
Number of cylinders	In-line 6
Displacement	7.7 l
Cooling system	Liquid cooled
Combustion principle	4-stroke, direct injection, turbo, after cooler
Air Filtration	Dry type
Electric system	24 V
Emissions	Tier 3, Euro Stage III A
Ventilation rate (Ultra low sulphur diesel)	CANMET 16,700 CFM 7,88 m <sup>3</sup> /s MSHA particulate index 12,000 CFM
Exhaust system	Catalytic converter with muffler
Average fuel consumption at 50% load	30 l/h
Fuel tank capacity	340 l

### CONVERTER

Dana C8000 Series with Lock up

### TRANSMISSION

Fully automatic transmission with electric shifting system. Four gears forward and two reverse

Dana 6000 Series

## AXLES

Front axle	Kessler D91 spring applied hydraulic operated brakes, equipped with standard differential, oscillation
Rear axle	Kessler D91 spring applied hydraulic operated brakes, equipped with standard differential, fixed

## TIRES

Tire size (Tires are application approved. Brand and type subject to availability.) 18.0 R 25 E4

## OPERATOR'S COMPARTMENT

**CABIN** (Cabin option replaces the standard canopy)

ROPS certification according to EN ISO 3471

FOPS certification according to EN ISO 3449

Sealed, air conditioned, over pressurized, noise suppressed closed cabin

Sound absorbent material to reduce noise

Laminated glass windows

Cabin mounted on rubber mounts to the frame to reduce vibrations

Air conditioning unit located outside the cabin to reduce noise inside the cabin

Cyclone pre-filter for A/C device

No high pressure hoses in the operator's compartment

Inclinometers to indicate operating angle

Emergency exit

Floor washable with water to reduce dust

Three-point contact access system with replaceable and colour coded handles and steps

Remote circuit breaker switch

### CANOPY (Standard)

ROPS certification according to EN ISO 3471

FOPS certification according to EN ISO 3449

No high pressure hoses in the operator's compartment

Inclinometers to indicate operating angle

Emergency exit

Floor washable with water to reduce dust

Three-point contact access system with replaceable and colour coded handles and steps

Remote circuit breaker switch

### OPERATOR'S SEAT

Low frequency suspension

Height adjustment

Adjustment according to the operator's weight

Fore-aft isolation

Padded and adjustable arm rests

Adjustable lumbar support

Selectable damping

Two-point seat belt

## MEASURED SOUND LEVEL

The sound pressure level and sound power level at the operator's compartment have been determined in stationary conditions on high idle and at full load, with engine Volvo TAD853VE

Sound pressure level $L_{pA}$ [dB re 20 $\mu$ Pa]	86 dB
Sound power level $L_{WA}$ [dB ew 1 p W]	117 dB

## MEASURED VIBRATION LEVEL

Whole body vibration was determined while operating the truck in a simulated working cycle consisting of loading, unloading and driving with and without a load. The value is determined by applying standards EN 1032 and ISO 2631-1.

Maximum r.m.s. value $a_w$ [ $m/s^2$ ]	0.55 (driving with load)
VDVW over 15 min period [ $m/s^{1.75}$ ]	7.54 (driving with load)

## DASHBOARD AND DISPLAYS

Sandvik Intelligent Control System	
Critical warnings and alarms	Displayed with light
Instrument Panel	Electrical gauges, 7" Display
Instrument Panel	Illuminated switches

## FRAME

### REAR AND FRONT FRAME

High strength structure with optimized material thicknesses. Reduced own weight for higher overall hauling capacity and long structural lifetime. Welded steel construction.

Adjustable lower bearing
Tanks are part of the frame structure
Automatic central lubrication

## HYDRAULICS

Door interlock for brake hydraulics	
Oil cooler for hydraulic and transmission oil	Capability up to 50 °C ambient temperature
Fittings	ORFS
Hydraulic oil tank capacity	380 l
Sight glass for oil level	2 pcs

## STEERING HYDRAULICS

Full hydraulic power steering, center articulated with double acting steering Cylinders. Open-center system with a gear pump and wheel steer control.

Steering main valve	Pilot operated
Steering hydraulic cylinders	114 mm, 2 pcs
Steering pump	Gear pump

## DUMP BOX HYDRAULICS

Full hydraulic open-center system with one gear pump. Oil flows to the dump box hydraulic system from the pump when the steering system is not in use. Joystick dump box control.

Hydraulic pump	Gear pump
Control valve	Pilot operated
Main valve	Pilot operated
Cylinders	159 mm, 2 pcs

## BRAKES

Service brakes are spring applied; hydraulically operated multi disc wet brakes on all wheels. Two independent circuits: one for the front and one for the rear axle. Service brakes also function as an emergency and parking brake. Brake system performance complies with requirements of EN ISO 3450, AS2958.1 and SABS 1589

Neutral brake	
Automatic brake activation system, ABA	
Electrically driven emergency brake release pump	
Brake pedal valve	Foot operated pedal, fully modulated

## ELECTRICAL EQUIPMENT

### MAIN COMPONENTS

Alternator	28 V 110 A
Batteries	2 X 12V, 950 CCA
Starter	24 V 5,5 kW
Driving lights	LED lights: 4 pcs in front 2 pcs in rear
Working lights	LED light, 1 pc rear of cabin
Reverse camera	Standard
Parking, brake and indicator (blinkers) lights	LED lights: 2 pcs in front 2 pcs in rear
Control system	Color display, inbuilt system diagnostics
Reverse alarm (CE)	
Flashing beacon	
Marker lights	

### ILLUMINATION

Illuminance Eav with 2 pieces of 50 W led lights at a distance of 20 m in front of the truck:	
Head lights, low beam Eav	20 lx
Illuminance Eav with 2 pieces of 50 W led lights at a distance of 20 m behind the truck:	
Reversing lights, low beam Eav	29 lx
Toro™ TH320i is compliant with the South African Mine health and safety act 29 of 1996, as the average light intensity in the direction	

## INCLUDED SAFETY FEATURES

### FIRE SAFETY

Portable fire extinguisher, 6 kg (CE)
Hot side – cold side design
Isolation of combustibles and ignition sources
Heat insulation on exhaust manifold, turbo, and isolated exhaust pipe

### ENERGY ISOLATION

Lockable main switch, ground level access
Emergency stop push buttons according to EN ISO 13850
Pressure release in the radiator cap
Automatic discharge for pressure accumulators (brake system and pilot circuit)
Frame articulation locking device
Mechanical dump box locking device

## DOCUMENTATION

### STANDARD MANUALS

Operator's Manual	English and other EU languages
Maintenance Manual	English and other EU languages
Parts Manual	English
Service and Repair Manual	English
ToolMan	2 x USB stick in pdf format, includes all the manuals
Decals	English and other EU languages

## OPTIONS

Tail gate for all box sizes
ROPS/FOPS closed cabin with 2-point seat belt, air conditioning and heater
Cover grills for lamps
Spare rim 13.00-25/2.5 for tyres 18.00R25k
Water cooled alternator
Recorder for monitoring camera system
Proximity Detection System Interface
Driving direction lights (red/green)
Clear flashing beacon
Jump start interface
Starter motor isolator
Electric filling pump for hydraulic oil
Wiggins quick fill set for oils and coolant
Wiggins fuel fill system
Arctic package 230 V (preheater for hydr. oil tank, transmission and engine block)
CE declaration of conformity
Eclipse™ Fire suppression system with auto shutdown, Sustain or Extreme agent delivered separately (CE)
ANSUL Twin fire suppression system with CHECKFIRE (CE)
ANSUL Twin fire suppression system without CHECKFIRE (CE)
Emergency steering (CE)
My Sandvik Digital Services Knowledge Box™: on-board hardware
Wheel chocks and brackets

## AVAILABLE BOXES

	Ejector Box			
Box capacity SAE heaped 2:1 (m <sup>3</sup> ) *	10.5 (standard)	12	14	8.8/9.9
Material broken density with 90 % fill factor (t/m <sup>3</sup> )	2.1	1.9	1.6	2.5/2.2
Total height (mm)	2350	2691	2490	2444

\* According to SAE 1363 / ISO 6483

## GRADE PERFORMANCE

Volvo TAD853VE Tier 3 (3% rolling resistance assumed, with lock-up engaged)

### Empty

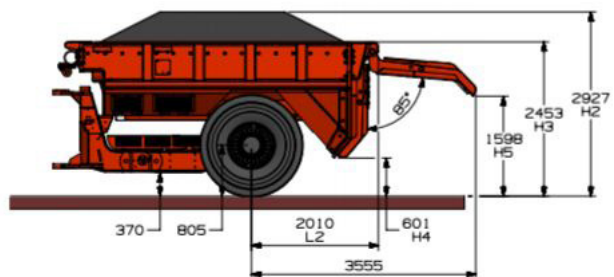
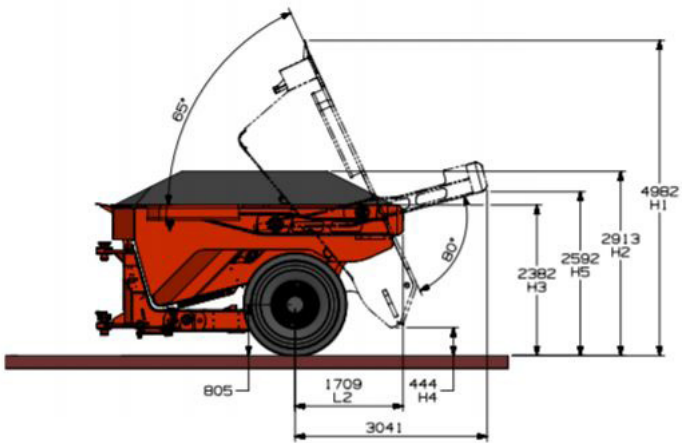
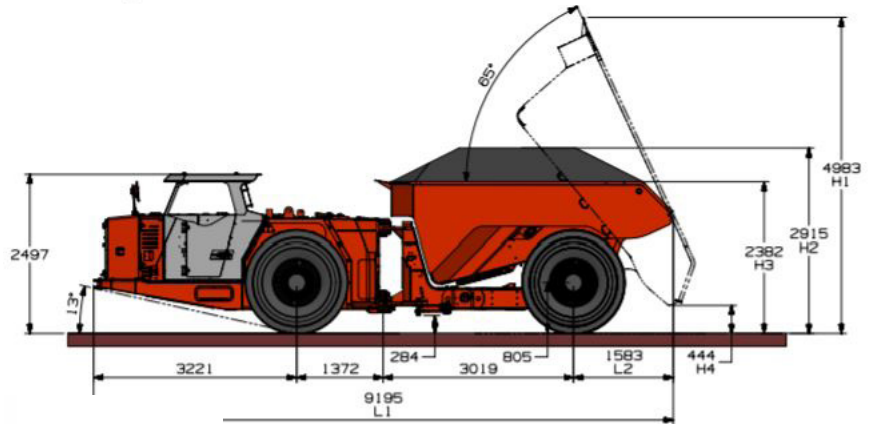
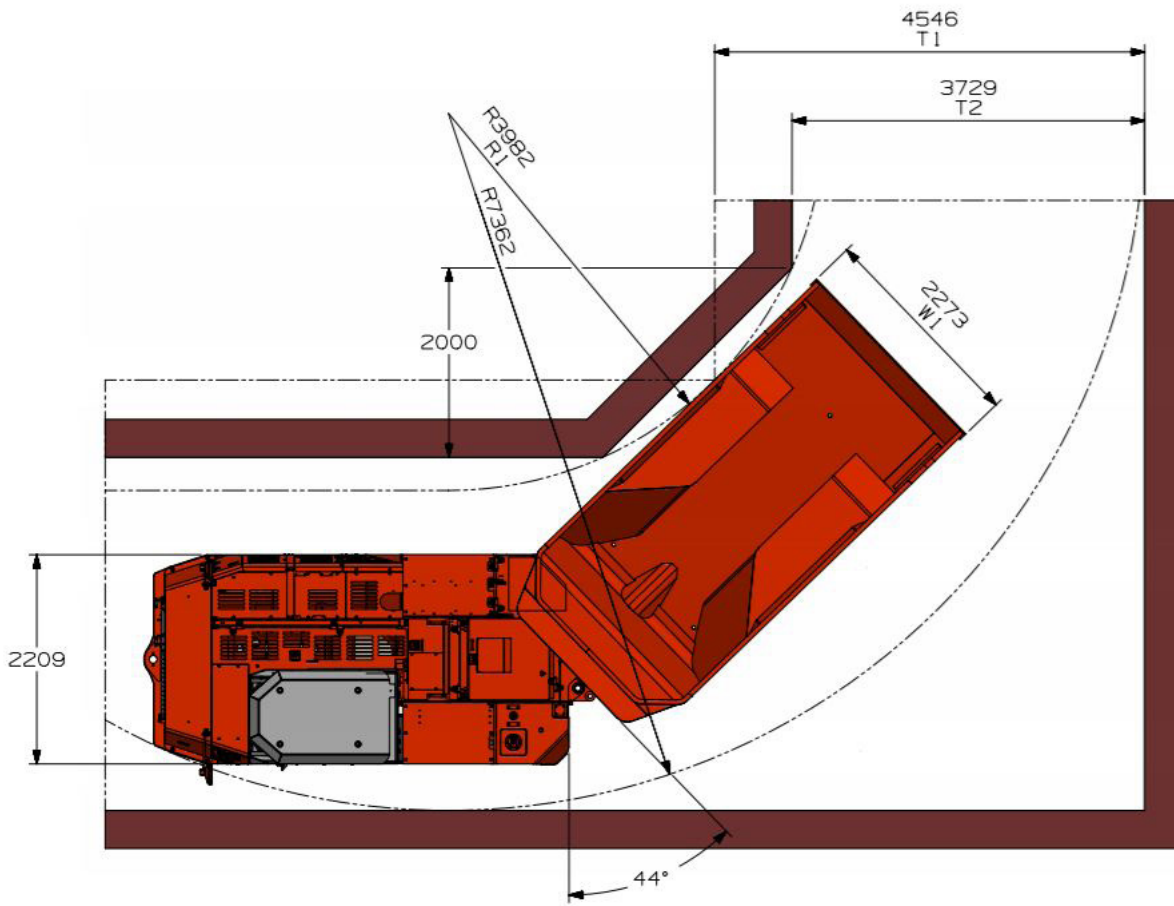
Percent grade	0,0	2,0	4,0	6,0	8,0	10,0	12,5	14,3	17,0	20,0
Ratio					1:12	1:10	1:8	1:7	1:6	1:5
1st gear (km/h)	5,3	5,3	5,2	5,2	5,2	5,2	5,2	5,1	5,1	5,1
2nd gear (km/h)	9,4	9,4	9,3	9,2	9,2	9,1	9,0	9,0	8,9	8,8
3rd gear (km/h)	16,5	16,3	16,1	15,9	15,7	15,4	15,2	14,3	12,8	
4th gear (km/h)	29,3	28,6	27,9	26,8	23,1					

### Loaded

Percent grade	0,0	2,0	4,0	6,0	8,0	10,0	12,5	14,3	17,0	20,0
Ratio					1:12	1:10	1:8	1:7	1:6	1:5
1st gear (km/h)	5,3	5,2	5,2	5,1	5,1	5,1	5,0	5,0	4,9	4,9
2nd gear (km/h)	9,3	9,2	9,1	9,0	8,8	8,7	8,4	7,8	6,9	
3rd gear (km/h)	16,2	15,8	15,4	14,6	12,5					
4th gear (km/h)	28,4	26,2								

DIMENSIONS								
Dump Boxes								
			STD		TAILGATE	TAILGATE	EJECTOR	EJECTOR
Volume SAE heaped 2:1*	(m³)	10.5	12.0	14.0	11.0	13.0	8.8	9.9
Maximum material density with fill factor of 90%	(t/m³)	2.1	1.9	1.6	2.0	1.7	2.5	2.2
Overall Machine Length	L1 (mm)	9195	9197	9344	9320	9257	9623	9622
Rear Axle to Rear of Machine	L2 (mm)	1583	1585	1663	1709	1646	20111	2010
Dump Position Height Max	H1 (mm)	4983	5108	5201	4982	5108		
SAE Heap Height	H2 (mm)	2915	3149	3133	2913	3142	3283	2927
Dumpbox Spillguard	H3 (mm)	2382	2616	2494	2382	2615	3447	2453
Discharge Height	H4 (mm)	444	416	298	444	499	602	6012
Ejector bucket tailgate height	H5 (mm)				2592	2336	1598	1598
Dumpbox width	W1 (mm)	2273	2210	2591	2608	2608	2500	2727
Dumpbox turn radius	R1 (mm)	3982	3996	3805	3875	3874	3867	3754
Minimum tunnel width	T1 (mm)	4546	4537	4672	4622	4623	4646	4706
Tunnel width	T2 (mm)	3729	3720	3864	3811	3812	3901	3901

\* According to SAE 1363/ISO 6483



# MATCHING PAIR SANDVIK LH307

Sandvik LH307 is a 6.7 tonne loader developed specifically for narrow-vein underground mines. The loader comes with a Stage III A / Tier 3 fuel efficient Volvo engine with Canmet and MSHA approvals as standard, providing long engine lifetime. Other available engines include a Tier 4f / Stage IV lowemission engine from Volvo for use with Ultra Low Sulphur Diesel fuel.

To improve operator safety and comfort, Sandvik LH307 can be equipped with a closed, air conditioned cabin. For improved safety of maintenance work, safety rails are available as an option. Camera systems and Proximity Detection System Interface are available for monitoring the loader immediate vicinity.

Sandvik LH307 is equipped as standrad with Sandvik Intelligent Control System and My Sandvik Digital Services Knowledge Box TM on-board hardware. The control system monitors the equipment productivity and health.

Bucket sizes vary from 3 m<sup>3</sup> to 3.7 m<sup>3</sup>, including bare lip and SHARK™ G.E.T. buckets. The G.E.T. solutions optimize loader productivity and extend bucket servicelife.

## CAPACITIES

Maximum tramming capacity	6 700 kg
Break out force, lift	13 665 kg
Break out force, tilt	11 320 kg
Standard bucket	3.0 m <sup>3</sup>

## SPEEDS FORWARD & REVERSE (LEVEL/LOADED) WITH ENGINE VOLVO TAD850VE

1st gear	4.5 km/h
2nd gear	9.0 km/h
3rd gear	15.0 km/h
4th gear	24.7 km/h

## BUCKET MOTION TIMES

Raising time	6.5 sec
Lowering time	3.8 sec
Dumping time	2.0 sec

## OPERATING WEIGHTS\*

Total operating weight	18 020 kg
Front axle	7 950 kg
Rear axle	10 070 kg

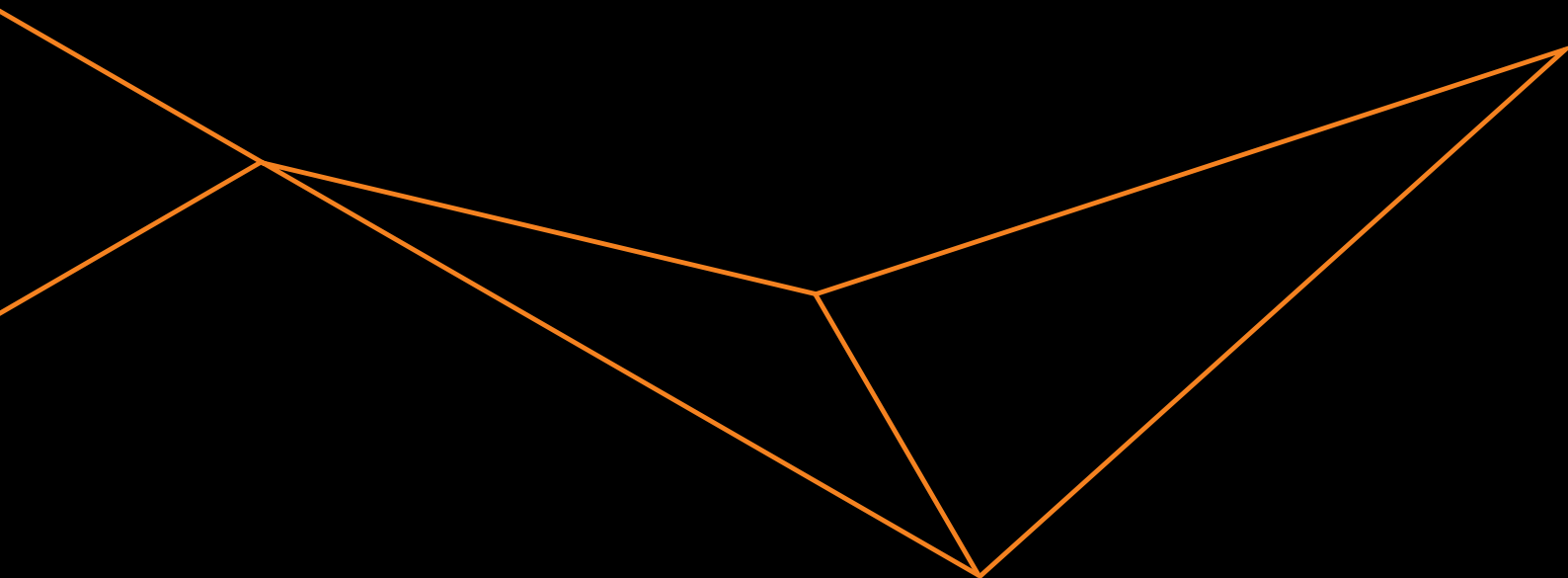
## LOADED WEIGHTS\*

Total loaded weight	24 720 kg
Front axle	18 050 kg
Rear axle	6 670 kg

\* Unit weight is dependent on the selected options





A series of orange lines form a complex geometric shape in the lower half of the page. The shape is composed of several interconnected triangles and quadrilaterals, creating a dynamic, abstract pattern.

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