

# KOMATSU®

## 930E-4

**MAXIMUM GVW**  
501974 kg **1,106,670 lb**

**GROSS HORSEPOWER**  
2014 kW **2,700 HP**

**930E**

**ELECTRIC DRIVE TRUCK**



Photos may include optional equipment

# SPECIFICATIONS



## ENGINE

Make and model	Komatsu SSDA16V160*
Fuel	Diesel
Number of cylinders	16
Operating cycle	4 cycle
Rated brake power**	2014 kW <b>2,700 HP</b> @ 1900 rpm
Flywheel power***	1902 kW <b>2,550 HP</b> @ 1900 rpm
Weight (wet)	9608 kg <b>21,182 lb</b>

\* Tier 2 emissions compliant. Tier 1 emissions engine is optional outside of North America.

\*\* Rated brake power is the output of the engine as installed in this machine, at governed rpm and with engine manufacturer's approved fuel setting. Accessory losses included are water pump, fuel pump and oil pump.

\*\*\* Flywheel power is the rated power at the engine flywheel minus the average accessory losses. Accessories include fan and charging alternator. Rating(s) represent net engine performance in accordance with SAE J1349 conditions.



## ELECTRIC DRIVE

### AC/DC CURRENT

Alternator	GTA-41
Dual impeller in-line blower	340 m <sup>3</sup> /min <b>12,000 cfm</b>
Control	AC Torque Control System
Motorized wheels*	GDY106 Induction Traction Motors
Ratio**	32.62:1
Speed (maximum)	64.5 km/h <b>40 mph</b>

\* Wheel motor application depends upon gross vehicle weight, haul road grade, haul road length, rolling resistance and other parameters. Komatsu and G.E. must analyze each job condition to assure proper application.

\*\* Optional ratios available.



## TIRES AND RIMS

Rock service, tubeless, radial tires	
Standard tire*	53/80 R63
Taper lock, five (5) piece rim	
914 mm x 1600 mm x 127 mm <b>36" x 63" x 5.0"</b> rim assembly.	
Rims rated at 758 kPa <b>110 psi</b> cold inflation pressure.	
Typical tire weight	26127 kg <b>57,600 lb</b>

\* Tires should meet application requirements for tkph/tmph, tread, compound, inflation pressure, ply rating or equivalent, etc.



## BODY

All-welded steel flat floor body with horizontal bolsters and full canopy. Eyebrow, rear wheel rock ejectors, body up sling and rubber mounts on frame are standard. Pivot exhaust heating optional.

Floor sheet	16 mm <b>0.63"</b> 1379 mPa <b>200,000 psi</b> tensile strength steel (two-piece)
Front sheet	9 mm <b>0.35"</b> 1379 mPa <b>200,000 psi</b> tensile strength steel
Side sheet	8 mm <b>0.31"</b> 1379 mPa <b>200,000 psi</b> tensile strength steel
Canopy sheet	5 mm <b>0.19"</b> 690 mPa <b>100,000 psi</b>
Struck	171 m <sup>3</sup> <b>224 yd<sup>3</sup></b>
Standard SAE heaped 2:1	211 m <sup>3</sup> <b>276 yd<sup>3</sup></b>
Standard Komatsu body weight	30362 kg <b>66,936 lb</b>

\*Komatsu must approve all bodies through a Body Application Worksheet



## CAB

Advanced Operator Environment with integral 4-post ROPS/FOPS structure Level 2, adjustable air suspension seat w/lumbar support and arm rests, full-size passenger seat, maximum R-value insulation, tilt and telescoping steering wheel, electric windshield wipers w/washer, tinted safety glass, power windows, Komatsu Payload Weighing System, 55,000 Btu/hr heater and defroster, 21,600 BTU/hr air conditioning (HFC - 134A refrigerant).



## FRAME

Advanced technology, full butt-welded box sectional ladder-type frame with integral ROPS supports, integral front bumper, rear tubular cross members, steel castings at all critical stress transition zones, rugged continuous horseshollar.

Plate material	482.6 mPa <b>70,000 psi</b> tensile strength steel
Casting material	620.5 mPa <b>90,000 psi</b> tensile strength steel
Rail width	305 mm <b>12"</b>
Rail depth (minimum)	864 mm <b>34"</b>
Top and bottom plate thickness	45 mm <b>1.77"</b>
Side plate thickness	25 mm <b>0.98"</b>
Drive axle mounting	Pin and spherical bushing
Drive axle alignment	Swing link between frame and axle



## BRAKING SYSTEM

Service brakes: oil-cooled, hydraulic-actuated, multiple disc brakes at each wheel. Traction system wheel slip/slide control.

Max. service apply pressure	17237 kPa <b>2500 psi</b>
Total friction area per brake	97025 cm <sup>2</sup> <b>15,038 in<sup>2</sup></b>
Emergency brakes	Automatically applied prior to hydraulic system pressure dropping below level required to meet secondary stopping requirements.
Wheel brake locks	Switch activated
Parking brakes	Multiple disc, spring-applied, hydraulically-released, dry brakes on inboard end of each wheel motor rotor shaft. Rated to hold on ±15% grade at maximum gross vehicle weight.

Electric dynamic retarder	Max 4026 kW <b>5400 hp</b> Continuous 2460 kW <b>3300 hp</b>
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Continuously rated high-density blown grids w/retard capacity at low speeds and retard in reverse propulsion.



## SUSPENSION

Variable rate hydro-pneumatic with integral rebound control

Max. front stroke	328 mm <b>12.92"</b>
Max. rear stroke	239 mm <b>9.40"</b>
Max. rear axle oscillation	±6.5°



## COOLING SYSTEM

L&M radiator assembly, split-flow, with deaerator-type top tank.

Radiator frontal area	7.02 m <sup>2</sup> <b>75.5 ft<sup>2</sup></b>
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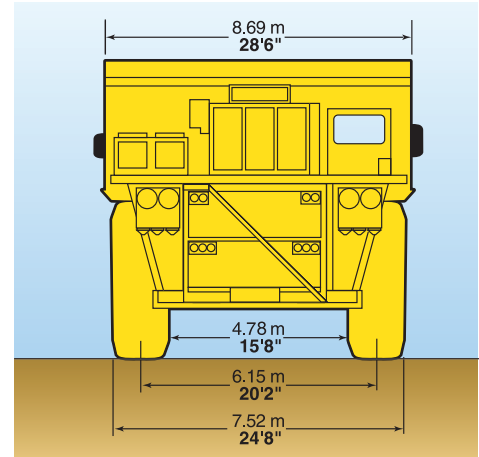
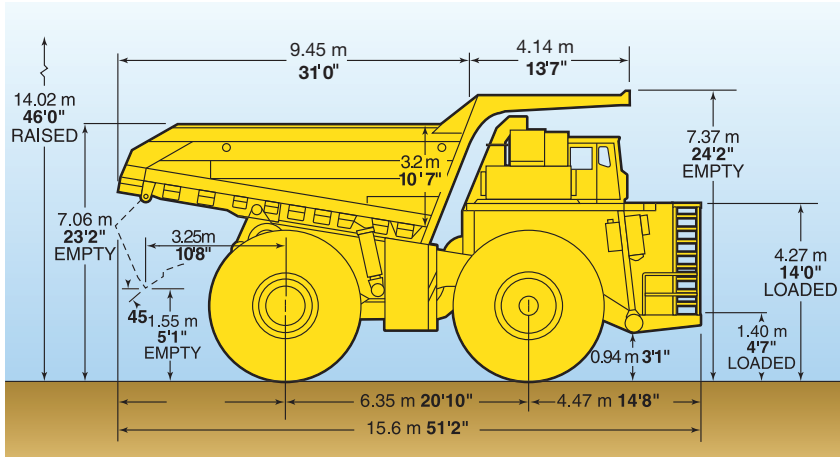
## SERVICE CAPACITIES

Cooling system	594 L	<b>157 U.S. gal</b>
Crankcase*	280 L	<b>74 U.S. gal</b>
Hydraulic system	1325 L	<b>350 U.S. gal</b>
Motor gear box (each)	95 L	<b>25 U.S. gal</b>
Fuel	4542 L	<b>1200 U.S. gal</b>

\* Includes lube oil filters



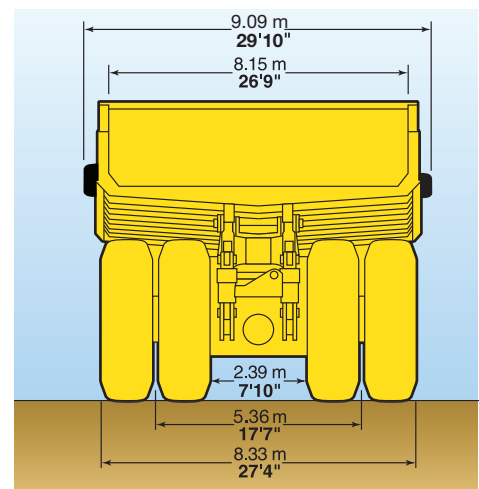
**DIMENSIONS**



All dimensions are with 211 m<sup>3</sup> 276 yd<sup>3</sup> body.

Bodies	Struck	2:1 Heap	Loading Height*
Standard	171 m <sup>3</sup> 224 yd <sup>3</sup>	211 m <sup>3</sup> 276 yd <sup>3</sup>	7.06 m 23'2"

\*Exact load height may vary due to tire make, type, and inflation pressure.



**HYDRAULIC SYSTEM**

Steering . . . . Accumulator assisted with twin double acting cylinders provide constant rate steering. Emergency steering automatically supplied by accumulator.

Turning circle diameter (SAE) . . . . . 29.7 m 97'7"

Reservoir . . . . . 947 L 250 U.S. gal

Filtration . . . . . In-line replaceable elements

Suction . . . . . Single, full flow, 100 mesh

Hoist and steering . . . . . Dual, in-line, high pressure

Brake component cabinet . . . . . Above deck, easily accessible with diagnostic test connections

Hoist . . . . . Two 3-stage dual-acting outboard cylinders, internal cushion valve, over-center dampening

Hoist times

Power-up loaded . . . . . 21 sec

Power-down . . . . . 23 sec

Float-down empty . . . . . 24 sec

Pumps . . . . . Two pumps, single package, end of alternator

Hoist and brake cooling . . . . . Tandem gear pump with output of 1022 lpm **270 gpm** at 1900 rpm and 17237 kPa **2,500 psi**

Steering and brake . . . . . Pressure-compensating piston pump with output of 246 lpm **65 gpm** at 1900 rpm and 18961 kPa **2,750 psi**

System relief pressures

Hoist and brake cooling . . . . . 17237 kPa **2,500 psi**

Steering and brake . . . . . 27579 kPa **4,000 psi**

Quick disconnects standard for powering disabled truck and for systems diagnostics.



**ELECTRICAL SYSTEM**

4 x 8D 1450 CCA, 12 volt, in series/parallel, 220-ampere-hour batteries, bumper-mounted with disconnect switch and lockout.

Alternator . . . . . 24 volt, 140 amp

Lighting . . . . . 24 volt

Cranking motors . . . . . Two/24 volt



**WEIGHT DISTRIBUTION**

**Empty vehicle weight** (wet, 100% fuel, no options, std. Komatsu body, std. tires)

Front axle . . . . . 99711 kg . . . **219,826 lb** 47%

Rear axle . . . . . 110476 kg . . . **243,557 lb** 53%

Total EVW . . . . . 210187 kg . . . **463,383 lb**

**Gross vehicle weight** (Nominal)

Front axle . . . . . 165651 kg . . . **365,201 lb** 33%

Rear axle . . . . . 336323 kg . . . **741,469 lb** 67%

Total . . . . . 501974 kg . . . **1,106,670 lb**

Nominal payload\* . . . . . 291790 kg . . . **643,287 lb**  
**320 U.S. ton**

\* Nominal payload is defined by Komatsu America Corp. payload policy documentation. In general, the nominal payload must be adjusted for the specific vehicle configuration and site application. The figures above are provided for basic product description purposes. Please contact your Komatsu distributor for specific application requirements.



## STANDARD EQUIPMENT

- Air cleaners, Donaldson SRG
- Air filter evacuators
- Alternator (24 volt/140A)
- Auto lubrication system w/ground level fill & level indicator
- Batteries—4 x 8D (1450 CCA's)
- Battery charging cable and socket
- Body over center device
- Brakes: oil-cooled, multiple disc front & rear
- Control cabinet
- Electric start
- Eliminator, Centinel, reserve oil tank
- Filters, high pressure hydraulic
- Gate valves on hydraulic tank
- Ground level radiator fill
- Komatsu Payload Weighing System—PLM-III
- Mirrors, LH flat and RH rectangular convex
- Mud flaps
- Muffled exhaust—deck-mounted
- Power supply, 24 volt and 12 volt DC
- Quick disconnects (hoist and diagnostics)
- Radiator sight gauge
- Removable power module unit (radiator, engine, alternator, blower)
- Retard speed control
- Reverse retarding
- Rock ejectors
- Thermostatic fan clutch
- Fast-fill fuel system (in tank and left side remote)
- Service center—LH
- Body impact plate

### OPERATOR ENVIRONMENT & CONTROL

- All hydraulic service brakes with emergency auto apply
- Battery disconnect switch
- Body up sling
- Brake lock and drive system interlock
- Circuit breakers, 24 volt
- Diagonal staircase across grill, L to R
- Dynamic retarding with continuous rated element grids
- Engine shutdown at ground level
- Hoist propulsion interlock
- Horns (electric—front and back-up)
- Integral ROPS/FOPS cab Level 2
- Maintenance and power lockout
- Parking brakes with warning light & speed application protection

- Power steering w/auto emergency steering
- Protective deck handrails
- Pump driveline protector
- Radiator fan guard
- Seat belts 76 mm 3" wide retractable
- Slip-resistant coating on walkways

### STANDARD HIGH VISIBILITY DELUXE CAB

- AC drive interface display
- Air cleaner vacuum gauges
- Air conditioner HFC-134A
- Alarm system warning lights (red)
  - Accumulator pre-charge
  - Auto lube pressure, low
  - Battery charge
  - Brake/hydraulic oil temp w/alarm
  - Electric system fault w/alarm
  - IM fail
  - Link energized
  - Low engine oil pressure w/alarm
  - Low brake pressure w/alarm
  - No propel/retard power w/alarm
  - Stop engine no propel w/alarm
  - Steering pressure w/alarm
- AM/FM radio/CD/mp3 and XM™ capable
- Column-mounted retarder control
- Digital tachometer and speedometer
- Dome light
- Engine hourmeter, oil pressure gauge, coolant temperature gauge, hydraulic oil temperature gauge
- Engine shutdown w/5 minute delay timer
- Floor mat (double barrier)
- Fuel gauge in cab and on tank
- Fuel low level light and buzzer
- Gauges (w/backlight)
- Headlight switch
- Heater and defroster (heavy-duty)
- Heater switch
- High beam selector and indicator
- Horn (center of steering wheel)
- Indicator lights (amber):
  - 5-minute shutdown timer
  - Check engine w/alarm
  - Circuit breaker tripped
  - Coolant high temperature w/alarm
  - Drive system temperature w/alarm
  - Dump body up
  - Dynamic retarding

- Low fuel
- Manual back-up lights
- Parking brakes applied
- Propel system not ready
- Propulsion system caution
- Propulsion system at rest
- Reduced propel system mode
- Retard at continuous level
- Retard speed control
- Service brakes
- Starter circuit
- Indicator lights (blue)
  - Engine service
  - KOMTRAX Plus snapshot (IM)
- Insulation (Max R-Value)
- KOMTRAX Plus
- Operator seat, adjustable w/air suspension, lumbar support and arm rests
- Panel lighting (adjustable)
- Passenger seat, full size
- Payload Meter PLM III
- Power windows
- Pressurized cab air system w/fan on
- Single brake/retarder pedal
- Starter key switch
- Sunvisor (adjustable)
- Tilt & telescoping steering wheel
- Voltmeter (battery output)
- Windshield (tinted safety plate)
- Windshield wiper (dual) and washer (electric)

### LIGHTING

- Back-up lights—rear mount (2) halogen
- Back-up lights—R and L - deck mount (2) halogen
- Brake and retard lights on top of cab
- Clearance lights
- Control cabinet service light (LED)
- Dynamic retarding, rear (2) halogen
- Engine compartment service lights
- Fog lights (2) halogen
- Headlights (8) halogen
- Stairway lights
- Manual back-up light, switch and indicator
- Payload lights R and L (LED)
- Platform lights R, L and Center
- Stop & tail lights (2) (LED)
- Turn signals halogen
- Under-hood service lights



## OPTIONAL EQUIPMENT

Note: Optional equipment may change operating weight.

- Body liners\*
- Fire extinguisher 9 kg **20 lb**
- Heated body
- Hot start engine coolant (220V 2-2500W)
- Hot start engine oil (220V 2-600W)
- Hubodometer (miles or Kilometers)
- Modular Mining Systems (MMS) ready
- Mufflers between frame rails
- Radiator shutters
- Reversed access ladder
- Service center—RH or dual LH/RH
- Special language decals
- Suspensions, cold weather

\*Available factory installed or non-installed. All other options and accessories listed are available factory installed only.

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