

KOMATSU®

980E-4 Electric Drive Truck

980E

GROSS HORSEPOWER
3,500 HP 2610 kW

NET HORSEPOWER
3,346 HP 2495 kW

NOMINAL GVW
1,378,500 lb 625277 kg



PHOTOS MAY INCLUDE OPTIONAL EQUIPMENT

980E

WALK-AROUND

980E-4



Photos may include optional equipment

980E-4

Electric Drive Truck

GROSS HORSEPOWER
3,500 HP 2610 kW
@ 1900 rpm

NET HORSEPOWER
3,346 HP 2495 kW
@ 1900 rpm

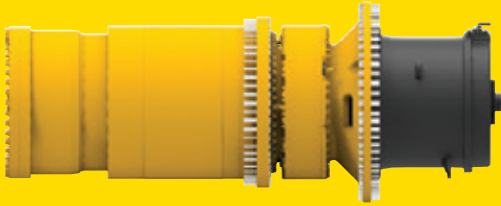
NOMINAL GVW
1,378,500 lb
625277 kg

KOMATSU ELECTRIC DRIVE POWERTRAIN

With tens of millions of operating hours, the Komatsu powertrain has proven efficiency in every application. This system features:

- Continuous propulsion and retarding up to an effective grade of 12%
- High torque for soft underfoot applications

- Top speed of 61 kph **38 mph**
- Invertex II™ control system with double-stacked IGBT
- Fuel efficient Komatsu SSDA18V170 engine



Productivity Features

- High performance Komatsu SSDA18V170 engine Gross Horsepower 2610 kW **3,500 HP**
- GE dual IGBT AC electric drive system
- 4476 kW **6,000 HP** continuous retarding capability
- Traction (spin-slide) control
- Automatic retard speed control
- Komatsu designed application specific body
- Tight turning radius 15.9 m **52' 2"**
- Payload Meter IV (PLM IV)

Reliability Features

- Frame design optimized for 363 metric ton **400 short ton** payload
- Simple and reliable hydraulic system
- Steering and brake accumulators
- Hydraulically actuated multiple-disc wet brakes (All four wheels)

Environmentally Friendly

- Komatsu SSDA18V170 engine is compliant with current U.S. EPA emissions regulations
- Fuel efficient engine
- Less fluids compared to mechanical drive trucks

Operator Environment

- Ergonomically designed spacious cab with excellent visibility
- Fully adjustable driving position settings
- Four post ROPS/FOPS Level 2 cab
- User friendly display with payload information
- Komatsu Hydrair® II suspensions designed for optimum ride comfort
- AM/FM/CD/MP3/USB/weather band radio
- Optional KomVision™ All Around Monitoring System



Easy Maintenance

- KOMTRAX Plus® allows immediate diagnostics of key engine, chassis, and drive system components
- Oil-cooled wet disc braking system reduces wear and extends component replacement intervals
- Automatic lubrication system
- Eliminator® oil filtration system
- Flange mounted rims with optional Komatsu Smart, speed type rims
- In-tank fast fuel system

KOMTRAX Plus®

KOMTRAX Plus equipped machines can send SMR and trend information to a secure website utilizing wireless technology. Machines also relay error codes, cautions, maintenance items, fuel burn, and much more.

Komatsu High Horsepower Engine

The 2610 kW **3,500 HP** Komatsu SSDA18V170 engine will operate in most of today's mining applications without experiencing power derate. Fuel efficiency is maximized due to optimized air handling with two-stage turbocharging. Standard features include:

- A standard pre-lube system designed to reduce start-up wear and increase overhaul life.
- CENSE® on board monitoring of engine performance for each cylinder.
- ELIMINATOR® filtration system reduces oil and filter changes by one-third.

Dual IGBT AC Electric Drive System

The GTA39 traction alternator coupled with GDY108C wheelmotors and Invertex II® AC control system provides reliable performance and easy maintenance. Invertex II® offers independent control of the rear wheelmotors, which in turn provides outstanding traction-ability during wet and slippery conditions, thus improving tire wear and operator confidence.

The air cooled Insulated Gate Bipolar Transistor (IGBT) inverter system technology provides the highest available reliability. The IGBT inverter is more compact and much simpler than the design of its predecessor, the Gate Turn Off (GTO) inverter, which improves serviceability and routine maintenance.

Electric Dynamic Retarder

The 4476 kW **6,000 HP** retarding system provides state of the art braking capacity for navigating today's mining applications which contain steep continuous descents and sharp switchbacks. Continuous retarding capacity enhances the productivity of the vehicle operator, while eliminating the need for excessive mechanical braking effort.



Traction (Spin-Slide) Control

During slippery conditions, the 980E-4 wheel traction control technology detects and corrects wheel spin or slide events. Traction control operates automatically and independently of the service brakes. During propulsion, “wheel slip control” reduces non-productive wheel spin in low traction conditions. During retarding, “wheel slide control” prevents wheel lockup and subsequent sliding.

Automatic Retard Speed Control

While in continuous descent, the operator has the capability to select a comfortable downhill travel speed. Automatic Retard Speed Control simultaneously manages the speed of each wheel independently to allow for any immediate adjustments needed during slippery underfoot conditions.

Komatsu Designed Application Specific Body

Utilizing the required Body Worksheet (BW) process, Komatsu ensures that each body is designed to meet the requirements for each specific application while carrying its rated payload. Komatsu works with each customer to understand the material properties at a mine site and to identify the appropriate liner package.

Komatsu offers a standard all-welded steel, flat floor body with a full canopy and horizontal bolsters. This body includes a driver side eyebrow, body up sling, and rubber mounts on the frame.

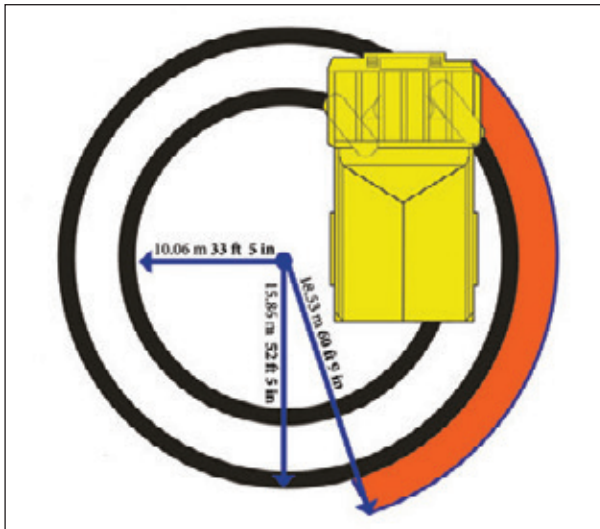
- Standard Body SAE Heaped 2:1: 250 m³ **327 yd³**
- Standard Komatsu Body Weight: 41731 kg **92,000 lbs**





Tight Turning Radius

By using double acting hydraulic steering cylinders with a six-point articulation linkage, the 980E-4 power steering system provides positive steering control with minimal operator effort. The turning radius of the 980E-4 is 15.9 m **52'2"**, which provides excellent maneuverability for tight loading and dumping conditions. The steering accumulators comply with ISO-5010 standards.



Payload Meter IV (PLM IV)

PLM IV is an electronic system that monitors and records payload information for Komatsu's off-highway mining trucks. The accurate and reliable payload measurement system is designed to help optimize payload, maximize productivity and reduce the life cycle cost of the machine. PLM IV tracks and records the following key production parameters:

- Payload
- Empty Carry-Back
- Operator Identification
- Haul Cycle, Loading, Dumping Time and Date
- Distance Traveled (Loaded and Empty)
- Cycle Time Information
- Maximum Speeds (Loaded and Empty)
- TMPH Estimate for Front and Rear Tires
- Average Speed (Loaded and Empty)

Hydrair® II Hydropneumatic Suspension

Hydrair® II is a suspension system that utilizes four nitrogen-over-oil cylinders. This suspension system is designed to maximize machine productivity by providing the operator with a smooth and comfortable ride. By absorbing shocks to the chassis during operation, Hydrair® II contributes to the durability of the machine's frame and components.



OPERATOR ENVIRONMENT

Ergonomically Designed Cab

The Komatsu 980E-4 cab design provides a comfortable and productive environment to meet today's mining demands. The cab includes tinted safety glass windows, heating and air conditioning, acoustical insulation, double sealed doors, and filtered and pressurized air to reduce dust.

User Friendly Display

The 980E-4 comes with a new operator friendly dash configuration which includes lighted gauges, switches and information panel. This allows the operator to see the status of the machine during operation and identifies any faults. An instructive message will appear after any fault is detected on the machine.

Built-in ROPS and FOPS Structure

These structures conform to ISO standards 3471 and 3449.

Operator Seat

Komatsu recognizes that operator comfort is a key to productivity in today's mining environment. The five-way adjustable operator seat and the tilt-telescopic steering column provide an optimum driving posture for increased operator comfort and control over the machine. The air suspension seat absorbs vibrations transmitted from the machine, reducing operator fatigue. A 51 mm **2 in** wide, blaze orange, three-point seat belt is provided as standard equipment.



Structurally Enhanced Frame Design

By using advanced computer-aided design, finite element analysis, and full-scale static and dynamic testing, the frame has been designed to carry 363 metric tons **400 short tons** and provides the high structural reliability Komatsu is known for.



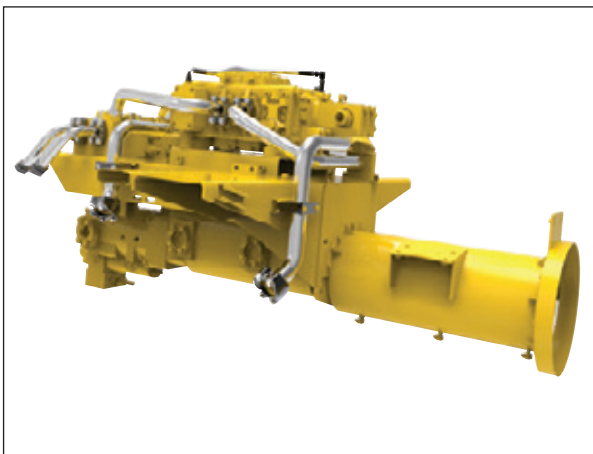
Castings Used in High Stress Areas

To increase frame reliability, steel castings have been incorporated at key frame pivot points and key load bearing critical portions of the frame. This includes the rear body pivot and horsecollar sections.

Simple and Reliable Hydraulic System

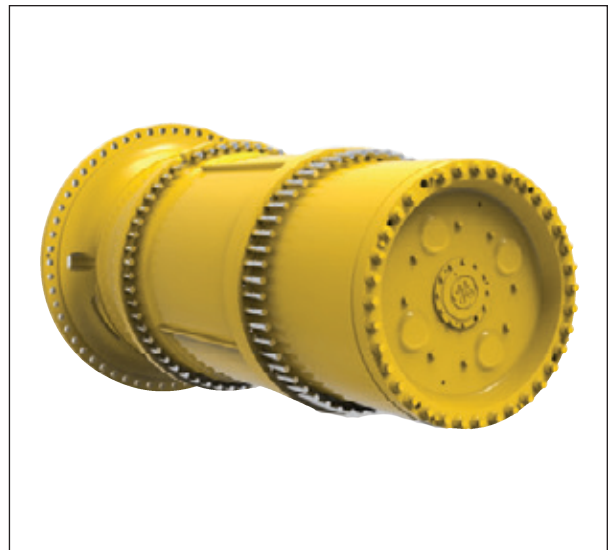
The hydraulic system is a proven and reliable design with fewer parts than other OEMs. The system utilizes a single tank, providing one common source of fluid for steering, braking, and hoisting. In-line, replaceable filtration elements provide protection from hydraulic system contamination, making the system easier to service.

To keep downtime to a minimum, Komatsu developed a sub-frame pump module that can be removed and replaced as a single unit. This reduces change-out time and allows easy access to the hydraulic pump module.



Proven Wheelmotor Design

The GDY108C wheelmotor builds on the success of its predecessor. Held to the highest standards, the transmission was subjected to extensive testing and quality confirmation, both on the bench and in the field. A full scale bench durability test was conducted during development to evaluate design quality prior to production. By using planetary design, extensive machining is not required during a standard rebuild.



Fully Hydraulic Controlled Multiple-Disc Wet Brakes

Although the dynamic retarding system is the primary braking force, the 980E-4 comes standard with four-wheel, hydraulically actuated, oil cooled service brakes. In the event that the truck's hydraulic system pressure drops below an acceptable level, accumulator tanks will automatically apply all wheel brakes to bring the truck to a complete stop.

- Max. service apply pressure: 18960 kPa **2,750 psi**
- Total friction area per brake: 103729 cm² **16,078 in²**

The oil cooled brake system provides lower maintenance costs and higher reliability versus dry disc brakes. This system is fully sealed to help keep contaminants out and reduce brake wear and maintenance. The brakes are hydraulically actuated, no pneumatic system is used. There are three independent hydraulic circuits that provide hydraulic back-up.

The 980E-4 stops in 57% of the required distance as stipulated by ISO 3450.



Photos may include optional equipment.

Extended Engine Oil Change

CENTINEL® is a continuous oil management system that extends oil change intervals for up to 4,000 hours. Engine oil is injected into the fuel system for consumption at a rate proportional to fuel burn. ELIMINATOR® is a self-cleaning filtration system that offers extended filter change intervals and superior serviceability.

Access, Service and Convenience

Located on the front left bumper adjacent to the main entry to the machine, Komatsu installs many service and convenience items. This central location simplifies maintenance events, reducing the time the truck is out of service for routine upkeep.

1. Auto-lubrication tank and controls
2. Power, starter and drive system lockout (lock-out/tag-out capable switches)
3. Ground level engine shut-down
4. Fluid service center (coolant, engine oil, hydraulic oil, grease fill)
5. Switch for access lights



KOMTRAX Plus®

As part of a complete service and support program, Komatsu equips every mining and quarry sized machine with Komtrax Plus®. By using a satellite-based communication system, Komtrax Plus® offers a new vision of monitoring your valuable assets. By providing insight to critical operating metrics the user can manage increased availability, lower ownership and operating costs and maximize fuel efficiency.

The information available through Komtrax Plus® allows service personnel to review faults and trends, improve the quality of the troubleshooting process and reduce unscheduled machine downtime.



(Optional) Komatsu Smart Rims

Komatsu Smart Rim technology allows easy removal and installation of the tires to minimize the overall impact on downtime.



ADDITIONAL FEATURES

Environmentally Friendly

Less Fluids Than Mechanical Drives

Komatsu's 980E-4 contains 63% less hydraulic fluid compared to similar class mechanical drive trucks, creating a lower environmental impact and making fluid replacement simpler, quicker and more economical.

U.S. EPA Compliant

The Komatsu SSDA18V170 engine is compliant with the U.S. EPA emissions regulations.

Reduced Fuel Consumption

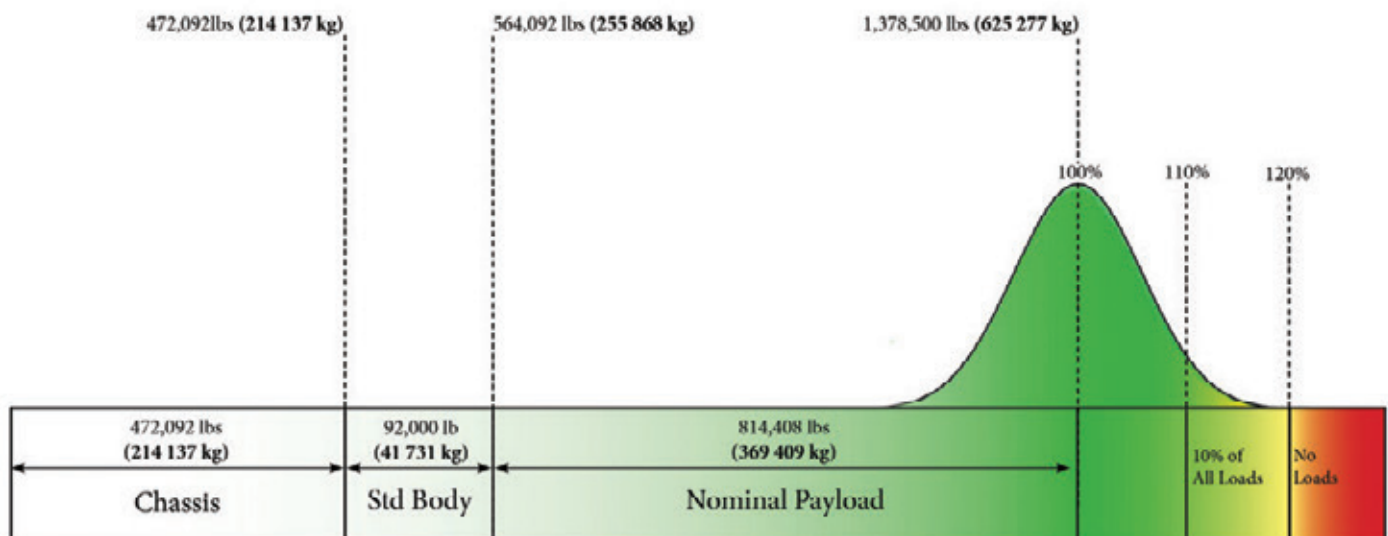
The engine and drive system are specifically tuned together, providing efficient power usage and minimizing fuel consumption.

Payload Policy

10-10-20 Load Policy Criteria

Recognizing that variation occurs naturally in material density, fill factors, and loading equipment, Komatsu America Corp. utilizes a defined payload policy. This payload policy is intended to identify the guidelines and limitations for the loading of Komatsu mining trucks, and is valid for approved applications and haul profiles only.

- 1) The average monthly payload must not exceed the rated payload of the truck.
- 2) 90% of all loads must be below 110% of the rated payload of the truck.
- 3) 10% of all loads may be between 110% and 120% of the rated payload of the truck.
- 4) No single payload may exceed 120% of the rated payload of the truck.



SPECIFICATIONS



ENGINE

Make and model	Komatsu SSDA18V170
Fuel	Diesel
Number of cylinders	18
Operating cycle	4 cycle
Gross horsepower*	2610 kW 3,500 HP @ 1900 rpm
Net flywheel power**	2495 kW 3,346 HP @ 1900 rpm
Weight (wet)	11750 kg 25,897 lbs
Weight (dry)	11250 kg 24,795 lbs

Optional: Tier 4 (TPEM) Engine
Tier 4 (TPEM) Engine – Canada

* Gross horsepower 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.

**Net 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-39
Dual Fan Main Blower	340 m ³ /min 12,000 cfm
Control	AC Torque Control System
Motorized wheels*	GDY108-C Induction Traction Motors
Ratio	35.02:1
Speed (maximum)	61 km/h 38 mph

* Drive system performance depends upon gross vehicle weight, haul road grade, haul road length, rolling resistance and other parameters. Komatsu must analyze each job condition to assure proper application.



TIRES AND RIMS

Rock service, tubeless, radial tires

Standard tire*	59/80 R63
Flange mount, five piece rim	1118 mm x 1600 mm x 140 mm
	44" x 63" x 5" rim assembly.

Rims rated at 758 kPa 110 psi cold inflation pressure.

Typical total tire weight.....32585 kg **71,838 lbs**

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



CAB

Advanced Operator Environment with integral 4-post ROPS/FOPS Level 2 structure (ISO 3449), adjustable air suspension seat w/lumbar support and arm rests, full-size passenger seat, maximum R-value insulation, tilt and telescoping steering column, electric windshield wipers w/washer, tinted safety glass, power windows, Payload Meter IV, 55,000 Btu/hr heater and defroster, 21,600 Btu/hr air conditioning (HFC - 134A refrigerant)



SUSPENSION

Variable rate hydro-pneumatic with integral rebound control	
Max. front stroke	303 mm 11.92"
Max. rear stroke	239 mm 9.40"
Max. rear axle oscillation	±6.5°



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 70,000 psi tensile strength steel
Casting material	620.5 MPa 90,000 psi tensile strength steel
Rail width	305 mm 12"
Rail depth (minimum)	864 mm 34"
Top and bottom plate thickness	45 mm 1.77"
Side plate thickness	25 mm 0.98" Rear 32 mm 1.26" Front
Drive axle mounting	Pin and spherical bushing
Drive axle alignment	Swing link between frame and axle



BODY

All-welded steel flat floor body with horizontal bolsters and full canopy. Rubber mounts on frame, eyebrow and body up sling are standard. Extended canopy and pivot exhaust heating are optional.

Floor sheet	16 mm 0.63" Outer 19 mm 0.75" Center 1379 MPa 200,000 psi tensile strength steel
Front sheet	10 mm 0.39" Outer 12 mm 0.47" Center 1379 MPa 200,000 psi tensile strength steel
Side sheet	10 mm 0.39" 1379 MPa 200,000 psi tensile strength steel
Canopy sheet	6 mm 0.24" 690 MPa 100,000 psi tensile strength steel
SAE heaped 2:1	250 m ³ 327 yd³
Standard Komatsu body weight	41731 kg 92,000 lb



BRAKING SYSTEM

Service brakes Oil-cooled, hydraulic actuated, multiple disc brakes at each wheel.

Traction system	Wheel spin-slide control
Max. service apply pressure	18960 kPa 2,750 psi
Total friction area per brake	103729 cm ² 16,078 in²
Auto apply system	Automatically applied prior to hydraulic system pressure dropping below level required secondary stopping requirements.
Secondary brake system ...	Complies with ISO-3450 Standards
Wheel brake lock	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.)	Continuous at 4476 kW 6,000 hp

Continuously rated high-density blown grids w/retard capacity at low speeds and retard in reverse propulsion.



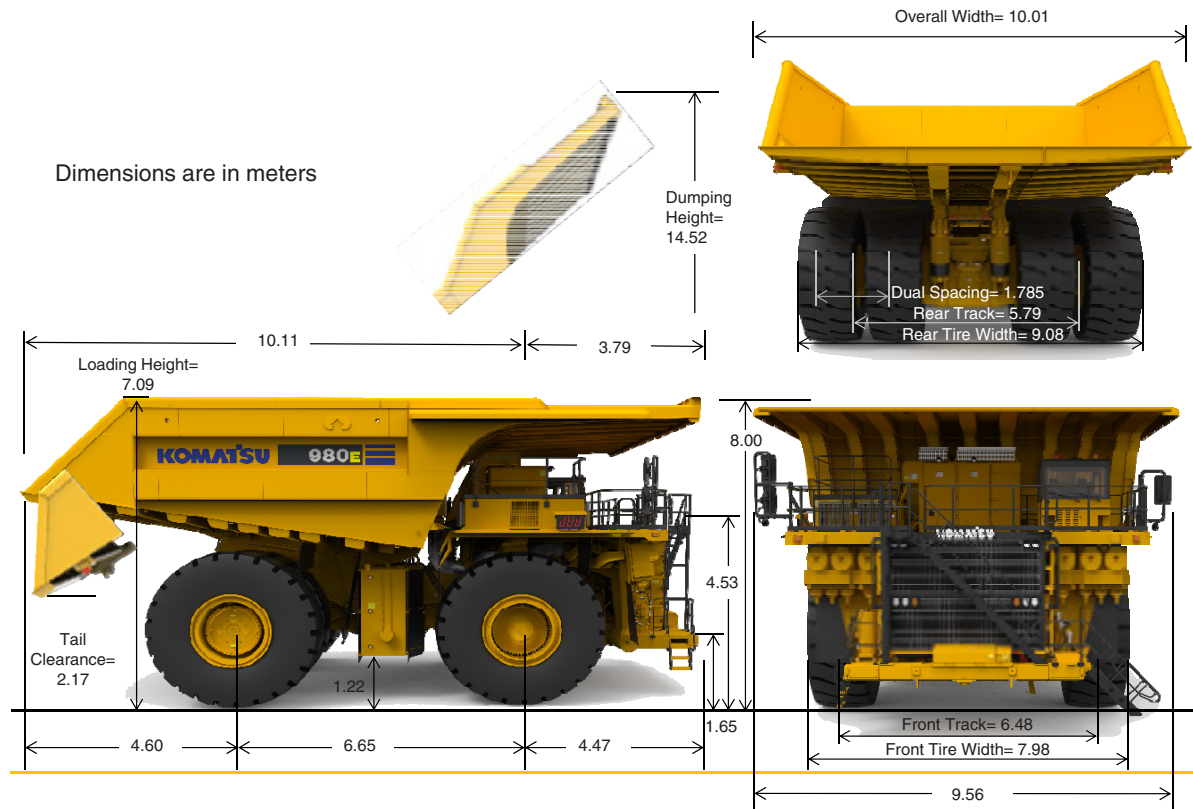
COOLING SYSTEM

Replaceable core radiator assembly, split-flow, with deaerator-type top tank.

Radiator frontal area	7.02 m ² 75.5 ft²
-----------------------------	--



DIMENSIONS



All dimensions are for unladen truck with standard body.



HYDRAULIC SYSTEM

- Steering Accumulator assisted with twin double acting cylinders provide constant rate steering. Secondary steering automatically supplied by accumulator.
- Turning circle diameter (SAE) 32 m **105'**
- 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 (high idle) 16 sec
 - Float-down empty (low idle) 17 sec
- Pumps Two pumps, single package, in-line
- Hoist and brake cooling Tandem gear pump with output of 931 lpm **246 gpm** at 1900 rpm and 18960 kPa **2,750 psi**
- Steering and brake Pressure-compensating piston pump with output of 246 lpm **65 gpm** at 1900 rpm and 20685 kPa **3,000 psi**
- System relief pressures
 - Hoist and brake cooling 17237 kPa **2,500 psi**
 - Steering and brake 20685 kPa **3,000 psi**
- Ports available for powering disabled truck and for system diagnostics.

Body	Capacity		Loading Height*
	Struck	2:1 Heap	

Standard	183 m ³ 240 yd³	250 m ³ 327 yd³	7.14 m 23'5"
----------	--	--	---------------------

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



ELECTRICAL SYSTEM

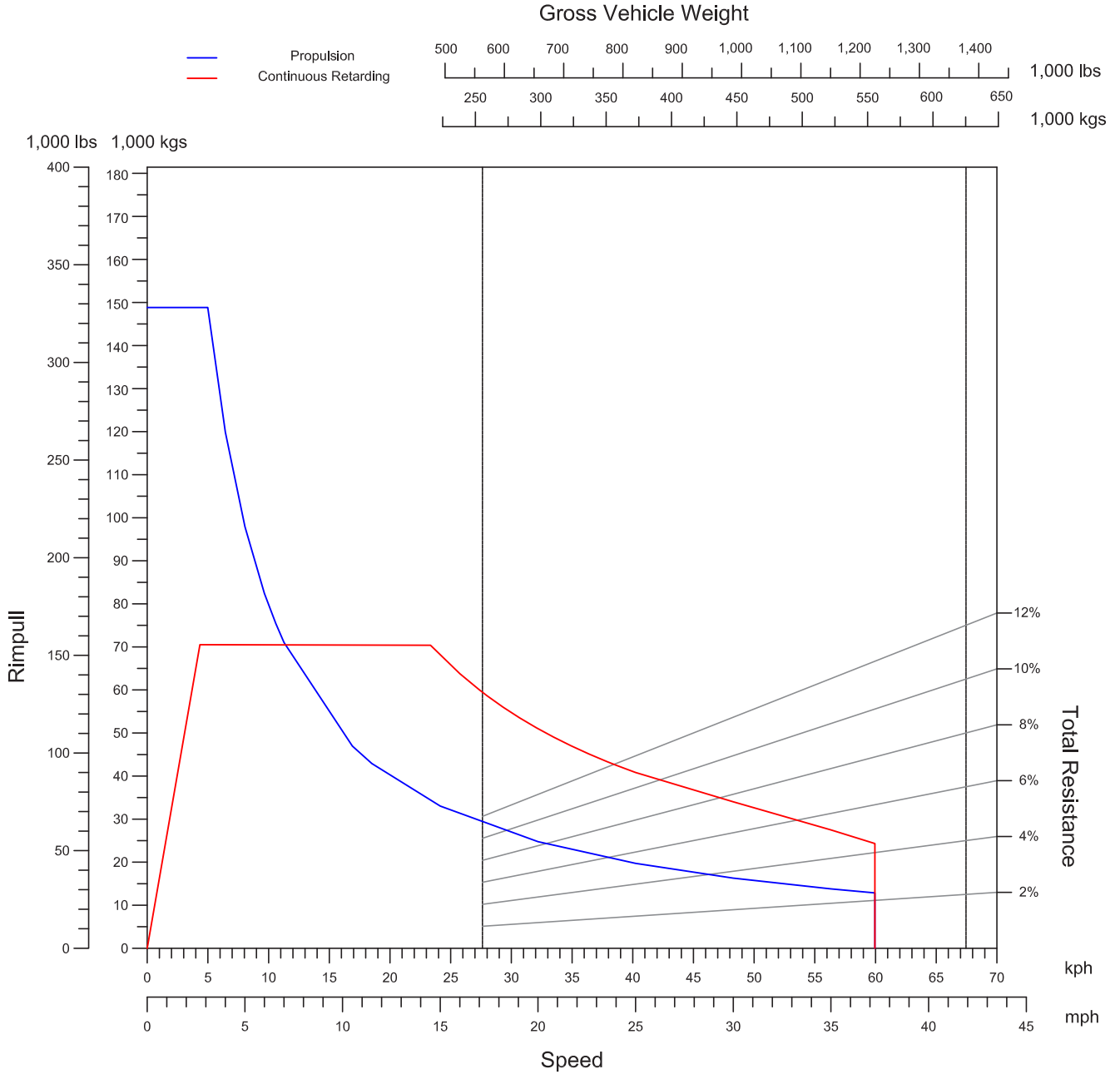
- 4 x 8D 1400 CCA, 12 volt, in series/parallel, 220 ampere-hour, bumper-mounted with disconnect switch & lock-out.
- Alternator 24 volt, 250 amp
- Lighting 24 volt
- Cranking motors Two/24 volt



SERVICE REFILL CAPACITIES

- Cooling System 719 L **190 U.S. gal**
- Crankcase 341 L **90 U.S. gal**
- Hydraulic system 1325 L **350 U.S. gal**
- Motor gear box (each) 95 L **25 U.S. gal**
- Fuel tank 5300 L **1,400 U.S. gal**

Performance Chart



980E-4

Empty Vehicle Weight

Front Axle Distribution (48%)	121537 kg	267,944 lbs
Rear Axle Distribution (52%)	134331 kg	296,148 lbs
Total EVW	255868 kg	564,092 lbs

Gross Vehicle Weight

Front Axle Distribution (33%)	205732 kg	453,561 lbs
Rear Axle Distribution (67%)	419545 kg	924,939 lbs
Nominal GVW	625277 kg	1,378,500 lbs

Payload

	369409 kg	814,408 lbs
Nominal Payload	369.4 metric tons	407.2 short tons

Nominal payload is defined by Komatsu America Corp's 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 the basic product description purposes. Please contact your Komatsu distributor for specific application requirements.





STANDARD EQUIPMENT

- Air cleaners w/ auto evacuators
- Alternator (24 volt/250A)
- Automatic lubrication system w/ground level fill, level indicator & dynamic timing
- Back-up alarm
- Batteries—4 x 8D (1400 CCA's)
- Battery charging/jump start connector
- Body over-center device
- Body-up sling (w/KAC supplied body)
- Brakes: oil-cooled, multiple disc front & rear
- Control cabinet
- Electric start
- Eliminator®, Centinel®, Cense®
- Fast-fill fuel system (in tank and left side remote)
- Filters, high pressure hydraulic
- Ground level radiator fill
- Mirrors, heated, multi-cambered convex LH & RH
- Mud flaps
- Muffled exhaust—deck-mounted
- Power supply, 24 volt and 12 volt DC
- Quick disconnects (steering, hoist and diagnostics)
- Retard speed control w/set indicator
- Radiator sight gauge
- Removable power module unit (radiator, engine, alternator, blower)
- Reverse retarding
- Service center—LH
- Thermostatic fan clutch

OPERATOR ENVIRONMENT & CONTROL

- All hydraulic service brakes with auto apply
- Back up alarm
- Battery disconnect switch
- Brake lock and drive system interlock
- Circuit breakers, 24 volt
- Diagonal staircase across grille
- Dynamic retarding with continuous rated element grids
- Engine shutdown at ground level
- Hoist propulsion interlock
- Horns (electric—front)
- Integral ROPS/FOPS Cab Level 2

- Maintenance and power lockout
- Parking brakes with warning light & speed application protection
- Power steering w/auto secondary steering
- Protective deck handrails
- Pump driveline protector
- Radiator fan guard
- Seat belts
 - Operator 3-point 51 mm **2"** retractable
 - Passenger lap 51 mm **2"** retractable
- Slip-resistant walkways

STANDARD HIGH VISIBILITY DELUXE CAB

- AC drive interface display
- Air cleaner vacuum gauges
- Air conditioner HFC-134A
- AM/FM radio with CD, USB & MP3
- Dome light
- Electronic Dash & Status Panel
 - Body up
 - Engine oil temperature (high)
 - Parking brake
 - Propulsion system not ready
 - No DC link voltage
 - No propel
 - Service brake applied
 - Wheel brake lock applied
 - Maintenance monitor
- Engine hourmeter, oil pressure gauge, coolant temperature gauge, hydraulic oil temperature
- Engine shutdown w/ "Smart Timer" delay
- Floor mat (double barrier)
- Fuel gauge in cab
- 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 (blue)
 - Engine service
 - KOMTRAX Plus® snapshot (IM)
- Komatsu Payload Meter IV (PLM IV)

- KOMTRAX Plus®
- Operator seat, adjustable w/air suspension, lumbar support and arm rests
- Panel lighting (adjustable)
- Passenger seat, mechanical suspension
- Power windows
- Pressurized cab air system w/fan on
- Single brake/retarder pedal
- Sunvisor (adjustable)
- Tilt & telescoping steering column
- Voltmeter (battery output)
- Windshield (tinted safety glass)
- Windshield wiper (dual) and washer (electric)

LIGHTING

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



OPTIONAL EQUIPMENT

Note: Optional equipment may change operating weight.

- 300 gpm fast fuel: RH in-tank, LH remote
- Antifreeze: below 40°F
- Body group, OEM ship loose*
- Bumper access - retractable steps
- Bumper mounted headlights
- Cold weather suspensions - front & rear
- Double wall exhaust
- Dump body - standard design
- Electric heater coolant
- Electric heater engine oil
- Electric heater hydraulic oil
- Engine access platforms
- Exhaust for heated body
- Fire extinguisher
- FLOC - LH service center
- Hydraulic tank - mud flaps only
- Hydraulic tank - ladder & mud flaps
- Komatsu Smart Rims
- Komatsu wireless bridge
- KomVision™ All Around Monitoring System
- LED headlights
- PLM scoreboard displays- RH & LH
- Premium operator & passenger seats
- Radiator shutters
- RH diagonal boarding stairway (replacing LH)
- Service center—RH (replacing LH)
- Spare rim (1)
- Spare Komatsu Smart Rim (1)
- Suspension charging kit
- Tier 4 TPEM engine - Canada
- Tier 4 TPEM engine - United States
- Tool group

*Mandatory for Komatsu supplied body. Recommended for Komatsu designed, locally manufactured body. Not Applicable to third-party body.

KOMATSU®