

# KOMATSU

## 980E-5SE

Electric drive truck



Safety



Reliability



Productivity



**Gross horsepower**  
3 281 kW (4,400 HP)

**Nominal GVW**  
635 029 kg (1,400,000 lbs.)

# 980E-5SE

## Engine

|                      |                                 |
|----------------------|---------------------------------|
| Make and model       | SDA16V190-1                     |
| Fuel                 | Diesel                          |
| Number of cylinders  | 16                              |
| Operating cycle      | 4-Stroke                        |
| Gross horsepower*    | 3 281 kW (4,400 HP) @ 1,800 rpm |
| Net flywheel power** | 3 169 kW (4,250 HP) @ 1,800 rpm |
| Weight (wet)         |                                 |
| Weight (dry)         | 13 585 kg (29,950 lbs.)         |

\* 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-63                                |
| Single impeller in-line blower | 127.4 m <sup>3</sup> /min (4,500 CFM) |
| Control                        | 1,800 V KG565                         |
| Motorized wheels*              | GDY108D                               |
| Ratio                          | 35.02:1                               |
| Speed (maximum)                | 64 km/h (40 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                          | 1 118 x 1 600 x 140 mm<br>(44 x 63 x 5.5") rim assembly |
| Rims rated at 758 kPa 110 psi cold inflation pressure |   |
| Typical total tire weight                             | 32 585 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), isolation mounted, adjustable air suspension with lumbar support and arm rests, full-size passenger seat, maximum R-value insulation, tilt/telescopic steering column, single brake pedal, electric windshield wipers with washer, tinted safety glass, power windows, automotive styling, Payload Meter IV, Modular Mining display built-in dash assembly, 55,000 Btu/hr heater and defroster, 21,600 Btu/hr air conditioning (HFC-134A refrigerant).

\* Optional: KomVision system built-in dash assembly

## Suspension

|  |                 |
|--|-----------------|
| Variable rate hydropneumatic with integral rebound control |                 |
| Maximum front stroke                                       | 303 mm (11.92") |
| Maximum rear stroke  | 239 mm (9.40")  |
| Maximum 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 horsecollar. |   |
| 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 / 32mm (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<br>1 379 MPa (200,000 psi) tensile strength steel |
| Front sheet                  | 10 mm (0.39") outer/12 mm (0.47") center<br>1 379 MPa (200,000 psi) tensile strength steel |
| Side sheet                   | 10 mm (0.39")<br>1 379 MPa (200,000 psi) tensile strength steel                            |
| Canopy sheet                 | 6 mm (0.24")<br>690 MPa (100,000 psi) tensile strength steel                               |
| Struck                       | 183 m <sup>3</sup> (240 yd <sup>3</sup> )  |
| SAE heaped 2:1               | 250 m <sup>3</sup> (327 yd <sup>3</sup> )  |
| Standard Komatsu body weight | 42 637 kg (94,000 lbs.)  |

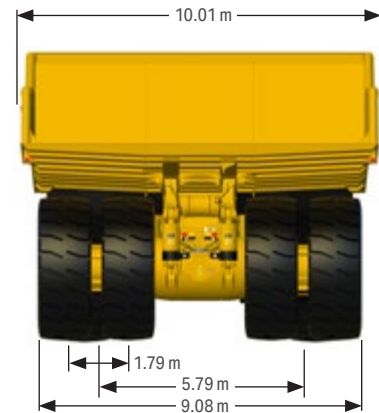
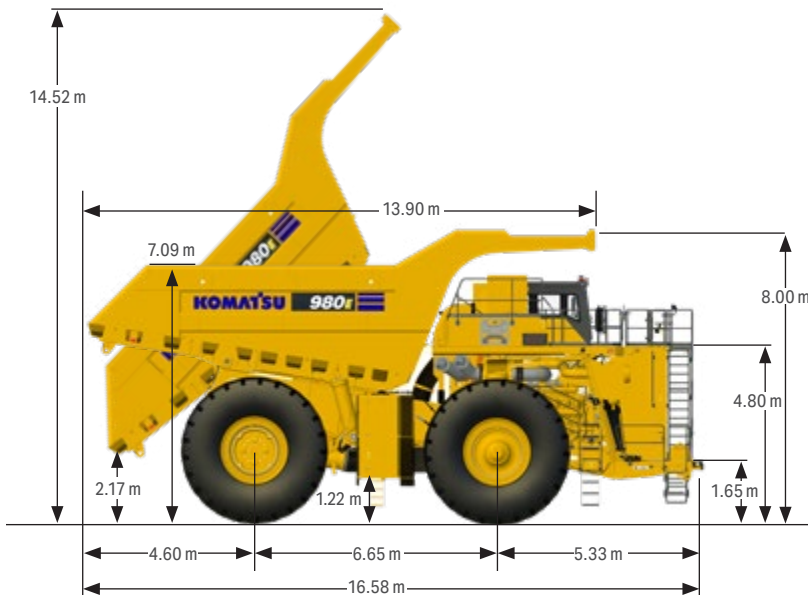
## Braking system

|                               |   |
|-------------------------------|---|
| Service brakes                | Oil-cooled, hydraulic actuated, multiple disc brakes at each wheel  |
| Traction system               | Wheel spin-slide control  |
| Max. service apply pressure   | 18 960 kPa (2,750 psi)  |
| Total friction area per brake | 103 729 cm <sup>2</sup> (16,078 in <sup>2</sup> )   |
| 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     | 4 854 kW (6,600 HP)   |

## Cooling system

|   |  |
|---|--|
| Replaceable core radiator assembly, split-flow, with deaerator-type top tank. |  |
| Radiator frontal area   | 8.46 m <sup>2</sup> (91 ft. <sup>2</sup> ) |

| Body     | Capacity                                  |   | Loading height* |
|----------|---|---|-----------------|
|          | Struck                                    | 2:1 Heap                                  |                 |
| Standard | 183 m <sup>3</sup> (240 yd <sup>3</sup> ) | 250 m <sup>3</sup> (327 yd <sup>3</sup> ) | 7.09 m (23' 3") |



## 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 US 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  | 26.5 s  |
| Power-down (high idle)   | 15 s  |
| Floater-down empty (low idle)  | 22 s  |
| Pumps  | Two pumps, single package, in-line  |
| Hoist and brake cooling  | Tandem gear pump with output of 931 lpm (240 gpm) at 1,800 rpm and 18 960 kPa (2,750 psi)   |
| Steering and brake   | Pressure-compensating piston pump with output of 246 lpm (64 gpm) at 1,800 rpm and 20 685 kPa (3,000 psi)                                       |
| System relief pressures  |   |
| Hoist and brake cooling  | 17 237 kPa (2,500 psi)  |
| Steering and brake   | 20 685 kPa (3,000 psi)  |
| Ports available for powering disabled truck and for system diagnostics |   |

## Electrical system

|  |             |
|--|-------------|
| 6 x 8D 1450 CCA, 12 V batteries, in series/parallel, bumper-mounted with disconnect switch |             |
| Alternator   | 24 V, 275 A |
| Lighting   | 24 V        |
| Cranking motors  | 3 x 24 V    |

## Service refill capacities

|                    |                     |
|--------------------|---------------------|
| Cooling system     | 992 L (262 gal)     |
| Crankcase*         | 500 L (132 gal)     |
| Hydraulic system** | 1 930 L (510 gal)   |
| Drive system       | 90 L (24 gal)       |
| Fuel               | 5 300 L (1,400 gal) |

\* Includes lube oil filters

\*\* Includes tank

## Standard equipment

- Air cleaners with auto evacuators
- Alternator (24 V/1 x 275 A)
- Automatic lubrication system with ground-level fill, level indicator and dynamic timing
- Backup alarm
- Batteries — 6 x 8D (1,450 CCAs)
- Battery charging/jump start connector
- Body over — center device
- Body-up sling (with KAC supplied body)
- Brakes: oil-cooled, multiple disc front and rear
- Control cabinet
- Cruise control
- Electric start
- Eliminator, Cense
- Fast-fill fuel system (in tank and remote)
- Filters, high pressure hydraulic
- Ground-level radiator fill
- Hydraulic tank ladder
- Mirrors:
  - LH: Flat with convex aux mirror
  - RH: Heated, multi-cambered convex
- Mud flaps
- Muffled exhaust — deck-mounted
- Power supply, 24 V and 12 V DC
- Quick disconnects (steering, hoist and diagnostics)
- Radiator sight gauge
- Removable power module unit (radiator, engine, alternator)
- Reverse retarding
- Service center — LH
- Electronically controlled viscous fan clutch

## Operator environment and control

- All hydraulic service brakes with auto apply
- Backup alarm
- Battery disconnect switch
- Brake lock and drive system interlock
- Circuit breakers, 24 V
- 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 and speed application protection
- Power steering with auto secondary steering
- Protective deck handrails
- Pump driveline protector
- Radiator fan guard
- Seat belts: operator and passenger 3-point
- Slip-resistant walkways

## Lighting

- Backup 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) LED
- Headlights (8) LED
- Manual backup light, switch and indicator
- Payload lights R and L (LED)
- Stairway lights (LED)
- Stop and tail lights (2) LED
- Turn signals (LED)

## Standard high visibility deluxe cab

- AC drive interface display
- Air conditioner HFC-134A
- AM/FM radio with CD, USB and MP3
- Digital air cleaner restriction gauges
- Dome light
- Multifunctional operator display
  - 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 with Smart Timer delay
- Floor mat (double barrier)
- Fuel gauge in cab
- Fuel low level light and buzzer
- Gauges (with 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 with air suspension, lumbar support and arm rests
- Panel lighting (adjustable)
- Passenger seat, mechanical suspension
- Power windows
- Pressurized cab air system with fan on
- Single brake/retarder pedal
- Sunvisor (adjustable)
- Tilt and telescoping steering column
- Voltmeter (battery output)
- Windshield (tinted safety glass)
- Windshield wiper (dual) and washer (electric)

## Optional equipment

Note: Optional equipment may change operating weight.

- 300 gpm fast fuel: RH in-tank, LH remote
- Amber beacon light
- Antifreeze: below 40 F
- Body group, OEM ship loose\*
- Body liners
- Bumper access — hydraulic retractable steps
- Bumper-mounted headlights
- Cold weather suspensions — front and rear
- Double wall exhaust tubes
- Dump body — standard design
- Electric heater (coolant, hydraulic oil, engine oil)
- Engine access platform, LH
- Exhaust for heated body
- Fire extinguisher
- FLOC — LH service center
- Mud flaps — fuel and hydraulic tank
- Komatsu Smart type rims
- Komatsu wireless bridge
- KomVision all-around monitoring system
- PLM scoreboard displays — RH and LH
- Rock ejectors
- Service center — RH (replacing LH)
- Spare rim (1)
- Spare Komatsu Smart type rim (1)
- Suspension charging kit
- Tool group

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

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