

# 930E-5

### ELECTRIC DRIVE TRUCK



GROSS HORSEPOWER 2,700 HP 2014 kW NOMINAL GVW 1,150,000 lb 521640 kg

## WALK-AROUND

#### **PRODUCTIVITY FEATURES**

- High performance Komatsu SSDA16V160 engine Gross Horsepower 2014 kW **2,700 HP** fully solid state AC electric drive system
- Traction (spin-slide) control
- Cruise control
- Komatsu designed application specific body
- Tight turning radius 15.8 m 51' 10"
- Payload Meter IV®
- 4027 kW 5,400 HP continuous retarding

#### **ENVIRONMENTALLY FRIENDLY**

- Komatsu SSDA16V160 engine with after-treatment meets U.S. EPA Tier 4 Final emissions regulations
- Fuel efficient engine
- · Less fluids compared to mechanical drive trucks

Photos may include optional equipment.

HORSEPOWER Gross: 2,700 HP 2014 kW NOMINAL PAYLOAD 320 US tons 290 metric tons



#### **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<sup>®</sup> II suspensions designed for optimum ride comfort
- AM/FM/CD/MP3/USB/weather band radio



#### **EASY MAINTENANCE**

- KOMTRAX Plus 2<sup>®</sup> allows immediate diagnostics of key engine, chassis, and drive system components
- Oil-cooled, wet disc, braking system reduces wear and extends replacement intervals
- Automatic lubrication system
- Eliminator® oil filtration system
- Flange mounted rims with optional Komatsu Smart, speed type rims
- In-tank fast fuel and DEF fill system

#### **RELIABILITY FEATURES**

- Frame design optimized for 290 tonne 320 short ton
- Simple and reliable hydraulic system
- · Steering and brake accumulators

# **PRODUCTIVITY FEATURES**

### Komatsu High Horsepower Engine

Komatsu's 2,700 HP 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 startup wear and increase overhaul life.
- CENSE® on board monitoring of engine performance for each cylinder.
- ELIMINATOR<sup>®</sup> filtration system reduces oil and filter changes by as much as one-third.

### **AC Electric Drive System**

The GTA51 traction alternator coupled with GDY106B wheel motors and Invertex IIe® AC control system provides reliable performance and easy maintenance. Invertex IIe® offers independent control of the rear wheel motors, which in turn provides outstanding traction-ability during wet and slippery conditions. This improves tire wear and increases 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 reduces routine maintenance.

### **Electric Dynamic Retarder**

The 4027 kW **5,400 HP** retarding system provides state of the art braking capacity for navigating today's mining applications which contain steep continuous descents and sharp switch-backs. Continuous retarding capacity enhances the productivity of the vehicle's operation, while eliminating the need for excessive mechanical braking effort.



### **Traction (Spin-Slide) Control**

During slippery conditions, the 930E-5 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.

### **Cruise Control**

Cruise control, both in propulsion and retarding, allows the operator to concentrate on steering and situational awareness while maintaining a constant speed. A set speed indicator provides confirmation the truck speed matches the desired speed selected by the operator, with simple automotive style controls.

#### Komatsu Designed Application Specific Body

Utilizing the required Body Worksheet (BW) process, Komatsu ensures that each body is designed to meet the requirements for specific applications 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: 202 m<sup>3</sup> 264 yd<sup>3</sup>
- Standard Komatsu Body Weight: 36228 kg 79,869 lbs



# **PRODUCTIVITY FEATURES**



### Payload Meter IV (PLM IV®)

PLM IV<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Hydropneumatic Suspension

Hydrair II<sup>®</sup> 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<sup>®</sup> contributes to the durability of the machine's frame and components.





### **Tight Turning Radius**

By using double acting hydraulic steering cylinders with a six-point articulation linkage, the 930E-5 power steering system provides positive steering control with minimal operator effort. The ISO 7457 turning circle diameter of the 930E-5 is 32 m **105'**, which provides excellent maneuverability for tight loading and dumping conditions. The steering accumulators comply with ISO-5010 standards.

# **OPERATOR COMFORT**

### **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 provides 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.

### **Built-in ROPS and FOPS Structure**

These structures conform to ISO standards 3471 and 3449.

### **Ergonomically Designed Cab**

The Komatsu 930E-5 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, pressurized air to reduce dust.

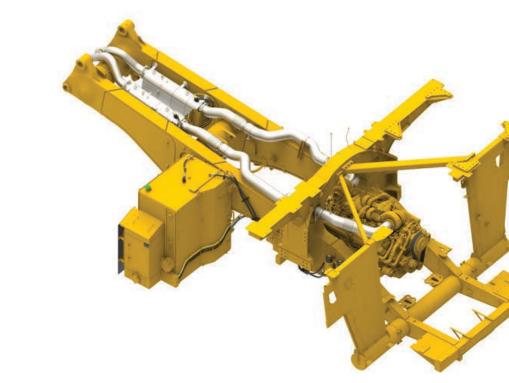
### **User Friendly Display**

The 930E-5 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 informs them of any faults. An instructive message will appear after any fault is detected on the machine.



Photo may include optional equipment.

# **TIER 4 AND ELECTRIFICATION**



#### **Evolutionary, not Revolutionary Design**

Komatsu's Tier 4 solution begins with a base engine which is very similar to the previous Tier 2 platform. In keeping the basic operation of the engine the same, durability is assured. Utilizing High Pressure Common Rail fuel delivery ensures atomization of the fuel/air mixture to a level which reduces particulate matter, meeting U.S. EPA Tier 4 standards.

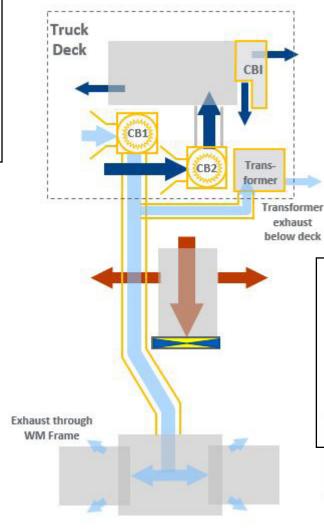
#### **Komatsu After-treatment**

Removal of NOx is accomplished by treating the exhaust through Selective Catalytic Reduction (SCR). The introduction of Diesel Exhaust Fluid (DEF) into the SCR canister generates a chemical reaction which breaks down the oxides of nitrogen into oxygen and nitrogen, both nonpollutants. Internal cleaning of the SCR is performed through an automatic process.



### On-Demand Cooling

- Separate cooling circuits for control group and wheel motor systems
- Allows intelligent control of cooling
- Maintain optimal temperatures for each system



### Alternator Self-Cooling Only

- Reduced impeller size by 25%
- Reduced cooling housing/ impeller
- 500 lb 227 kg weight reduction

# Uses Wheel Motor generator retarding energy for cooling

- Control Group
- Wheel Motors
- Grid Blower

# **RELIABILITY FEATURES**

### Structurally Enhanced Frame Design

By using advanced computer-aided design, finite element analysis and full-scale dynamic and static testing, the frame has been designed to carry 290 metric tons 320 short tons

and provides the high structural reliability Komatsu is known for.

### **Castings in High Stress Areas**

To increase frame reliability, steel castings have been incorporated at key frame pivot points and critical load bearing portions of the structure. 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 Wheel Motor Design**

The GDY106B Wheel Motor builds on the success of its predecessor. Held to the highest standards, the transmission and motor were subjected to extensive testing and quality confirmation. A full scale controlled durability and field test was conducted at Komatsu's Proving Grounds during development to confirm 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

While the dynamic retarding system is the primary braking force, the 930E-5 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, the accumulators will automatically apply all wheel brakes to bring the truck to a complete stop.

- Max. service apply pressure: 17237 kPa 2,500 psi
- Total friction area per brake: 97025 cm2 15,038 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 930E-5 stops within the required distance as stipulated by ISO 3450.



# **EASY MAINTENANCE**

### 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. Emergency engine shut-down
- 4. Fluid service center (coolant, engine oil, hydraulic oil, grease fill)
- Hydraulic step up/down switch (Hydraulic stairs are optional)

### **KOMTRAX Plus 2®**

As part of a complete service and support program, Komatsu equips every mining and quarry sized machine with KOMTRAX Plus 2<sup>®</sup>. By using a satellite-based communication system, KOMTRAX Plus 2<sup>®</sup> offers a new vision of monitoring your valuable assets. By providing insight to critical operating metrics the user can manage increased availability, lower owning and operating costs and maximize fuel efficiency.

The information available through KOMTRAX Plus 2<sup>®</sup> allows service personnel to review faults and trends, improve the quality of the troubleshooting process and reduce unscheduled machine downtime.





### **Flange Type Tire Rims**

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

Smart Type Rim (7 Piece Type Rim components)					
1 234					
	🥤 🏜 🕇	ITEM	QTY	DESCRIPTION	
		1	1	Rim Base	
		2	2	Smart Lock Ring	
		3	2	Bead Seat Band	
		4	2	Side Ring	

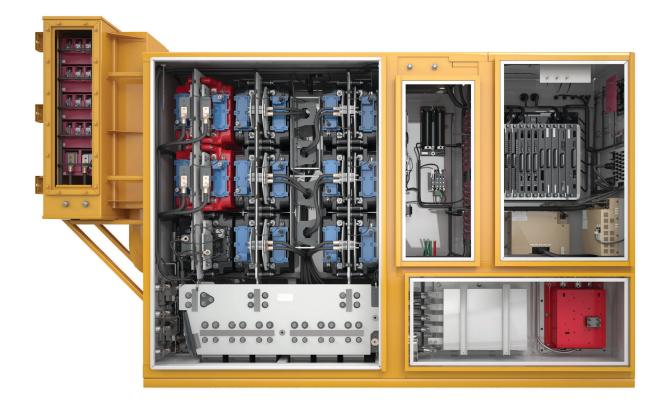
### **DRIVE SYSTEM**

### **Drive System (Invertex IIe)**

- Cooling Blower Inverters (CBI)
- True Quad Chopper Eliminates RP Contactors
- Only Single Stack IGBT's
- From 24 to 12 Traction IGBT's Reduces Weight & Size
- Meets IP54 for Dust & Moisture Control
- Increased Cabinet Rigidity
- Reduced Rigid Multi-axis Joints
- Fiber Optic Cards Integrated Into Backplane
- Front Placement of Indicator & Interface Panels
- Front Access for Maintenance
- All LED Lighting

#### Improved Bus Bar

- Close Molded Design- Eliminates Potting
- No Soldered Bushings
- Edge Protection
- FR4 & Abrasion Protection
- Simplified, More Robust Bus Bar Design



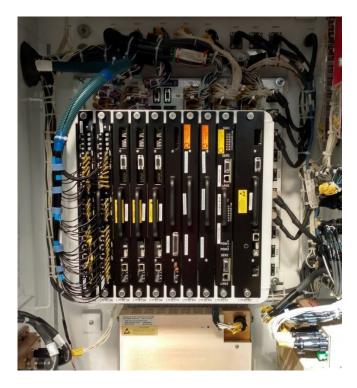
# **DRIVE SYSTEM**

### Improved Truck Performance

- Retains Wheel Slip/Slide control in all Modes of Operation
- Cruise Control (Both Motoring & Retarding)
- Fuel Saver 2 Built-in

### **Technology Advancements**

- Supports Data Collection & Transmission for Remote Monitoring
- New Generation Technology for Faster Processing with Higher Capacity (90% Faster Data Transfer)
- Common CAN Network Consists of Engine, Truck & Drive System
- Supports CAN, Ethernet & USB



### **VID Display**

- Replaces DID Panel
- In-cab Touch Screen Display for Setup, Maintenance & Troubleshooting
- Access, Download & Update System from the Operators Cab
- Entry to Control Cabinet no Longer Required for Basic Troubleshooting

Events Test	s C	ata	Setting	ls S	/stem	Lang	luage
Ver: 6.09a Truck	ID: 42415	OEM:	Komatsu	Model: 8	30E-5		
Status:	0	K Activ	e Faults:	Drive:	0 E	Engine:	0
Mode:	PROPE	L No A	ctive Drive	Faults			
Speed Limit:	40.	0					$\wedge$
Payload:	31	9					
Engine Speed:	180	0					$\checkmark$
Battery Volts:	27.	5					
Link Volts:	119	9					
Control Group Blower (R	PM): 360	0					
Wheel Motor Blower (RF	M): 360	0					
Grid Blower 1 (RPM):	87	9					
Grid Blower 2 (RPM):	87	9					
NORETARD NOPROP	SPDLIM	LIMP	CONT-RET	TRAC-DI	S CHOP	-DIS C	BI-DIS

### WebPTU

- Replaces wPTU
- Primary Maintenance & Troubleshooting Tool for all Future Systems
- Browser Based Access & Visualization of Truck System
   Data
- Eliminates Dependency on Legacy PC's & Operating Systems
- Accessible in Operators Cab via Ethernet



# **ADDITIONAL FEATURES**

### **Environmentally Friendly**

### Less Fluids than Mechanical Drives

Komatsu electric drive trucks contain 57% less hydraulic fluid compared to similar class mechanical drive trucks, creating a lower environmental impact and makes fluid replacement simpler, quicker and more economical.

### **U.S. EPA Compliant**

The Komatsu SSDA16V160 engine is compliant with the U.S. EPA Tier 4 emissions regulations.

### **Reduced Fuel Consumption**

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

### Komatsu Loading Policy for Mining Trucks

In normal loading operations, variations in payloads occur. The loading policy identifies the guidelines and limitations for the loading of those Komatsu Mining Truck models specified.

### **Definitions:**

- Rated GVW (Gross Vehicle Weight) includes the chassis, body, tires, accessories (including local options), lube, fuel, operator, payload and any excess material build-up.
- Rated Payload is the resultant difference of Rated GVW minus EVW.
- Overload refers to any payload amount in excess of the Rated Payload.
- Never to exceed GVW is the maximum allow able GVW under the guidelines of this Policy.

Actual payloads greater than the Rated Payload are allowable, but shall not result in a GVW that is greater than the Never to Exceed GVW.

No single payload that results in a GVW in excess of the Never to Exceed GVW is allowed under any circumstances.

The mean of all payloads for a rolling 30-day period shall not exceed the Rated Payload.

Truck Model	930E-5 	
Specification	lb	kg
Rated GVW	1,150,000	521,640
Standard Tire Size	53/80R63	
Rated / Nominal Payload	640,000	290,299
Never To Exceed GVW	1,278,000	579,688

# SPECIFICATIONS



Make and model	Komatsu SSDA16V160
Fuel	Diesel
Number of cylinders	
Operating cycle	
	2014 kW 2,700 HP @ 1800 rpm
Net flywheel power**	1930 kW 2,588 HP @ 1800 rpm
Weight (wet)	
Weight (dry)	
* Optional Tier 4 emissions complia	nt engine for North American market. Non-
emissionized engine for markets o	utide of North America

\* 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

each job condition to assure proper application.

# TIRES AND RIMS

Rock service, tubeless, radial tires

914 mm x 1600 mm x 127 mm **36" x 63" x 5.0"** rim assembly. Rims rated at 758 kPa **110 psi** cold inflation pressure.

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

\* Tires sold separately.



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).

### 

Variable rate hydro-pneumatic with integral rebound control			
Max. front stroke	328mm <b>12.92"</b>		
Max. rear stroke			
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 horsecollar.

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	
Rail depth (minimum)	
Top and bottom plate thickness	45 mm <b>1.77"</b>
Side plate thickness	25 mm <b>0.98"</b> Rear
	32 mm <b>1.26"</b> Front
Drive axle mountingPi Drive axle alignmentSwing link	

### 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 <b>0.63"</b> Outer 19 mm <b>0.75"</b> Center
13	379 MPa 200,000 psi tensile strength steel
Front sheet	. 10 mm <b>0.39"</b> Outer 12 mm <b>0.47"</b> Center
13	79 MPa 200,000 psi tensile strength steel
Side sheet	8 mm <b>0.39"</b> 1379 MPa
13	79 MPa 200,000 psi tensile strength steel
Canopy sheet	6 mm <b>0.24"</b> 690 MPa
6	89 MPa 100,000 psi tensile strength steel
SAE heaped 2:1	
Standard Komatsu bod	y weight

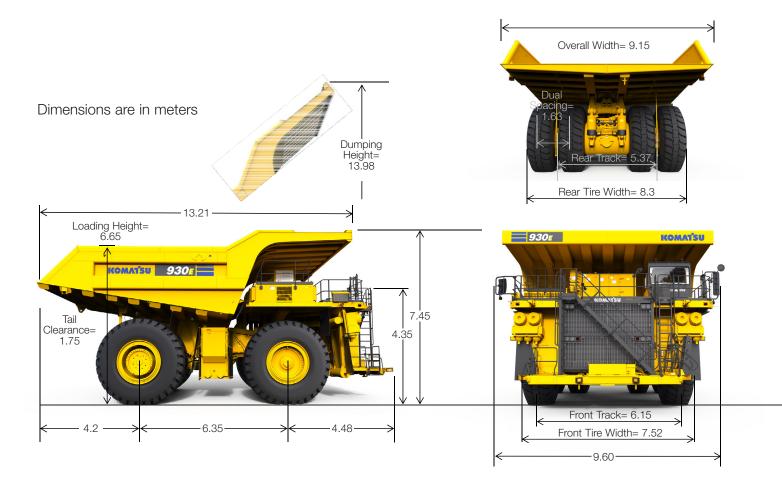
### BRAKING SYSTEM

Service brakesOil-cooled, hydraulic
actuated, multiple disc brakes at each wheel
Traction system wheel spin-slide control
Max. service apply pressure7237 kPa 2,500 psi
Total friction area per brake
Auto apply system Automatically applied prior to hydraulic
system pressure dropping below level required to meet 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 $\pm 15\%$ grade at
maximum gross vehicle weight.
Electric dynamic retarder 4026 kW <b>5,400 hp</b>

### COOLING SYSTEM

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

### 930**E-**5





Body	Capacity		Loading	
Bouy	Struck	2:1 Heap	Height*	
Standard	151 m³ <b>197 yd</b> ³	202 m <sup>3</sup> 264 yd <sup>3</sup>	6.65 m <b>21'10''</b>	

\*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	
Lighting	
Cranking motors	Two/24 volt

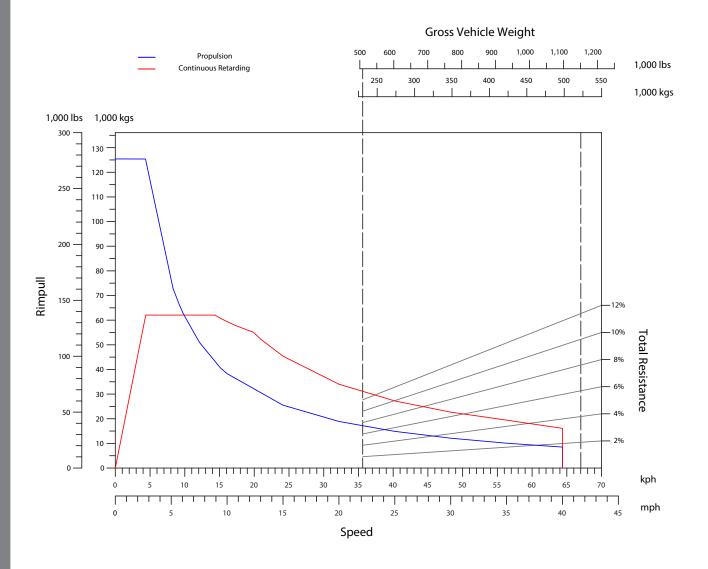
#### 

Cooling System	568 L	150 U.S. gal
Crankcase	363 L	95.8 U.S. gal
Hydraulic system	1325 L	350 U.S. gal
Motor gear box (each)	57 L	15 U.S. gal
Fuel tank	.4542 L	1,200 U.S. gal
DEF tank	288 L	76 U.S. gal

# SPECIFICATIONS

### **Truck Performance Graph**

### 930E-5 PERFORMANCE 2,700 HP - 53/80 R63 Tires



	hicle Weight* Front Axle Distribution	108181 kg	238,500 lbs	48%
	<b>Rear Axle Distribution</b>	123150 kg	271,500 lbs	<b>52%</b>
	Total EVW	231331 kg	510,000 lbs	
Gross Ve	hicle Weight			
	Front Axle Distribution	172141 kg	379,500 lbs	33%
	<b>Rear Axle Distribution</b>	349499 kg	770,500 lbs	67%
	Nominal GVW	521640 kg	1,150,000 lbs	
Payload				
Nominal Payload		290000 kg <b>640,000 lbs</b> 290 metric tons <b>320 short tons</b>		

Nominal payload is defined by Komatsu America Corp's payload policy documentation. The figures above are provided for the basic product description purposes. Please contact your Komatsu distributor for specific application requirements.

\*Includes option allowance





- Air cleaners, Donaldson® SSG w/ auto evacuators
- Alternator (Charging 24 volt/250A)
- Automatic lubrication system w/ground level
- fill, level indicator & dynamic timing
- Back-up alarm
- Batteries–4 x 8D (1450 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
- Electric start

- Eliminator®, 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 to 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)
- Reverse retarding
- Service center–LH
- Thermostatic fan clutch

#### **OPERATOR ENVIRONMENT & CONTROL:**

**OPTIONAL EQUIPMENT** Note: Optional equipment may change operating weight.

- · All hydraulic service brakes with
- auto apply
- Battery disconnect switch
- · Brake lock and drive system interlock
- Circuit breakers, 24 volt
- Diagonal staircase across grille
- Dynamic retarding with continuous

Amber Beacon Light

· Body liners

Evebrow

AESS921-00

Body up sling

Extended canopy

Application Specific Body Structure

• Bumper Mounted Headlights

Double Wall Exhaust Tubes

• Engine Access Platform-LH

• Fire extinguisher 9 kg 20 lb

KOMA

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Note: All comparisons and claims of improved performance made herein are made with respect to the prior Komatsu model unless otherwise specifically stated.

Bumper Access Hydraulic Retractable Stairs

- 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 gaugesAir 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 gauge
- 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)

• Hot start engine oil (220V 2-500W)

• Hot start engine coolant (220V 2-2500W)

Komvision All-Around Monitoring System

• Mufflers between frame rails (standard Tier IV)

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Heater switch

Heated body

Hubodometer

LED Headlights

Lights (HID)

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Hot start hydraulic oil

Komatsu Smart Rims

PLM IV<sup>®</sup> scoreboards

- High beam selector and indicator
- Horn switch (center of steering wheel)
- Indicator lights (blue) - Engine service
- Komtrax Plus 2<sup>®</sup> snapshot (IM) Komatsu Payload Meter IV
- Komtrax Plus 2<sup>®</sup> 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) halogen Back-up lights–R and L-

Engine compartment service lights

- deck mount (2) halogen
- Brake and retard lights on top of cab
- Clearance lights (LED)
- Dynamic retarding, rear (2) (LED)

Headlights (8) halogen
Manual back-up light, switch

Payload lights R and L (LED)

Stairway lights
Stop & tail lights (2) (LED)

• Premium Operator Seat

Reversed access ladder

Special language decals

Komatsu America Corp. is an authorized licensee of Komatsu Ltd.

Materials and specifications are subject to change without notice

Suspensions (cold weather)

01/19 (EV-2)

• Service center-RH

Shutters (radiator)

Spare Smart Rim

Rock Ejectors

AD01(Electronic View Only)

Spare Rim

• Turn signals (LED)

Fog lights (2) halogen

and indicator