

DASH 3



## ZAXIS 85USB-3

- Engine Rated Power: 54 hp (40.5 kW) @ 2,000 rpm
- Operating Weight: 18,821 lb. (8537 kg)
- Backhoe Bucket: 0.40–0.66 cu. yd. (0.31–0.50 m<sup>3</sup>)

# ZAXIS 85USB-3 SPECIFICATIONS

## Engine

|                                  |   |
|----------------------------------|---|
| Manufacturer and Model.....      | Isuzu 4LE2X                               |
| Non-Road Emission Standards..... | certified to EPA interim Tier-4 emissions |
| Net Power (ISO9249).....         | 54 hp (40.5 kW) @ 2,000 rpm               |
| Cylinders.....                   | 4   |
| Displacement.....                | 133 cu. in. (2.2 L)                       |
| Off-Level Capacity.....          | 70% (35 deg.)                             |
| Aspiration.....                  | turbocharged with intercooler             |

## Cooling

Variable-speed fan, directly driven by the engine through a linear clutch; nonreversible

## Powertrain

Two-speed propel with automatic shift

### Maximum Travel Speed

|            |                    |
|------------|--------------------|
| Low .....  | 1.9 mph (3.1 km/h) |
| High ..... | 3.1 mph (5.0 km/h) |

## Hydraulics

Open center, load sensing

|                          |   |
|--------------------------|---|
| <b>Main Pumps</b> .....  | 3 variable-displacement axial piston              |
| Maximum Rated Flow ..... | 2 x 20.9 gpm + 16.3 gpm (2 x 79.2 L/m + 61.6 L/m) |

|                              |                    |
|------------------------------|--------------------|
| <b>Pilot Pump</b> .....      | one gear           |
| Maximum Rated Flow .....     | 5.3 gpm (20 L/m)   |
| System Relief Pressure ..... | 566 psi (3900 kPa) |

### System Operating Pressure

|                         |   |
|-------------------------|---|
| Implement Circuits..... | 3,771 psi (26 000 kPa)  |
| Travel Circuits .....   | 4,554 psi (31 400 kPa)  |
| Swing Circuits .....    | 3,626 psi (25 000 kPa)  |
| Controls .....          | pilot levers, short stroke, low effort; hydraulic pilot controls with shutoff lever |

## Cylinders

Heat-treated, chrome-plated, polished cylinder rods, hardened steel (replaceable bushings) pivot pins

|                  | <b>Bore</b>      | <b>Rod Diameter</b> | <b>Stroke</b>     |
|------------------|------------------|---------------------|-------------------|
| Boom (1) .....   | 4.5 in. (115 mm) | 2.6 in. (65 mm)     | 34.8 in. (885 mm) |
| Arm (1).....     | 3.7 in. (95 mm)  | 2.4 in. (60 mm)     | 35.4 in. (900 mm) |
| Bucket (1) ..... | 3.3 in. (85 mm)  | 2.2 in. (55 mm)     | 28.7 in. (730 mm) |

## Electrical

|                         |   |
|-------------------------|---|
| Batteries .....         | 2 x 12 volt                                       |
| Reserve Capacity .....  | 100 min.  |
| Alternator Rating ..... | 50 amp  |
| Work Lights.....        | halogen (2), one mounted on boom and one on frame |

## Undercarriage

|   |                       |
|---|-----------------------|
| Carrier Rollers (per side).....             | 1                     |
| Track Rollers (per side).....               | 5                     |
| Shoes, Triple Semi-Grouser (per side) ..... | 40                    |
| Drawbar Pull .....                          | 14,661 lb. (6650 kg)  |
| Track                                       |                       |
| Adjustment.....                             | hydraulic             |
| Chain.....                                  | sealed and lubricated |

## Swing Mechanism

|                   |                            |
|-------------------|----------------------------|
| Swing Speed ..... | 10.5 rpm                   |
| Swing Torque..... | 12,244 lb.-ft. (16 600 Nm) |
| Boom Swing        |                            |
| Left.....         | 60 deg.                    |
| Right .....       | 60 deg.                    |

## Ground Pressure

|   |                  |
|---|------------------|
| 24-in. (600 mm) Triple Semi-Grouser Shoes ..... | 3.7 psi (26 kPa) |
| 18-in. (450 mm) Rubber Crawler Pads .....       | 4.9 psi (34 kPa) |
| 18-in. (450 mm) Rubber Crawler Belt.....        | 4.9 psi (34 kPa) |

## Serviceability

### Refill Capacities

|                             |                   |
|-----------------------------|-------------------|
| Fuel Tank .....             | 35.7 gal. (135 L) |
| Cooling System.....         | 2.7 gal. (10.3 L) |
| Engine Oil with Filter..... | 3.2 gal. (12.1 L) |
| Hydraulic Tank.....         | 15 gal. (56 L)    |
| Hydraulic System.....       | 27 gal. (103 L)   |
| Propel Gearbox (each).....  | 1.3 qt. (1.2 L)   |

## Operating Weights

With Full Fuel Tank; 175-lb. (79 kg) Operator;  
0.53-cu.-yd. (0.41 m<sup>3</sup>), 30-in. (762 mm),  
735-lb. (333 kg) Bucket; 5-ft. 4-in. (1.62 m)  
Arm; 3,269-lb. (1483 kg) Counterweight;  
and 8-ft. 1-in. (2470 mm) Blade

|  |                      |
|--|----------------------|
| 24-in. (600 mm) Triple Semi-Grouser Shoes..... | 18,821 lb. (8537 kg) |
| 18-in. (450 mm) Rubber Crawler Pads.....       | 18,490 lb. (8387 kg) |
| 18-in. (450 mm) Rubber Crawler Belt .....      | 18,530 lb. (8405 kg) |

### Optional Components

Undercarriage

|  |                     |
|--|---------------------|
| 24-in. (600 mm) Triple Semi-Grouser Shoes..... | 3,366 lb. (1527 kg) |
| 18-in. (450 mm) Rubber Crawler Pads.....       | 3,036 lb. (1377 kg) |

One-Piece Boom (with arm cylinder).....

|                    |
|--------------------|
| 1,116 lb. (506 kg) |
|--------------------|

Arm with Bucket Cylinder and Linkage

|                             |                  |
|-----------------------------|------------------|
| 5 ft. 4 in. (1.62 m) .....  | 608 lb. (276 kg) |
| 6 ft. 11 in. (2.12 m) ..... | 661 lb. (300 kg) |

Boom Lift Cylinder .....

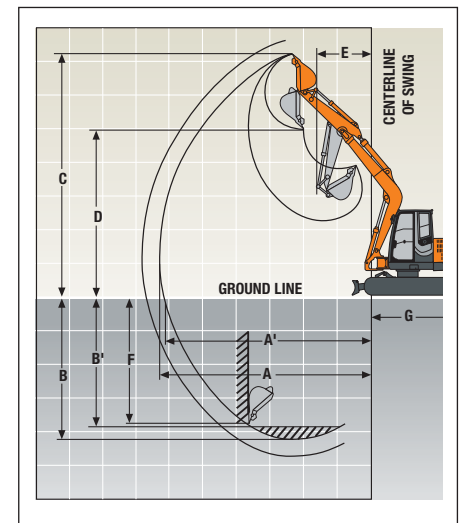
|                 |
|-----------------|
| 196 lb. (89 kg) |
|-----------------|

Counterweight (standard).....

|                     |
|---------------------|
| 3,269 lb. (1483 kg) |
|---------------------|

## Operating Dimensions

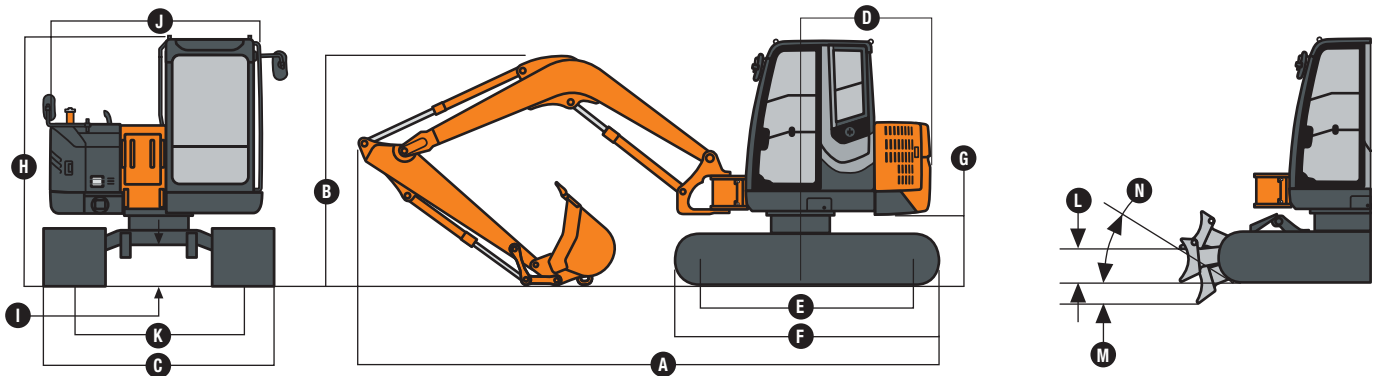
|   | <i>Arm Length</i><br>5 ft. 4 in. (1.62 m) | <i>Arm Length</i><br>6 ft. 11 in. (2.12 m) |
|---|---|--|
| Arm Force .....   | 8,554 lb. (38.1 kN)                       | 7,209 lb. (32.1 kN)                        |
| Bucket Digging Force .....  | 12,368 lb. (55.0 kN)                      | 12,368 lb. (55.0 kN)                       |
| Lifting Capacity Over Front at Ground Level                           |   |  |
| 20-ft. (6.1 m) Reach .....  | 4,248 lb. (1927 kg)                       | 4,151 lb. (1883 kg)                        |
| <b>A</b> Maximum Reach.....   | 23 ft. 8 in. (7.21 m)                     | 25 ft. 3 in. (7.70 m)                      |
| <b>A'</b> Maximum Reach at Ground Level .....                         | 23 ft. 2 in. (7.05 m)                     | 24 ft. 9 in. (7.55 m)                      |
| <b>B</b> Maximum Digging Depth .....                                  | 13 ft. (3.97 m)                           | 14 ft. 8 in. (4.47 m)                      |
| <b>B'</b> Maximum Digging Depth at 8-ft.<br>(2.44 m) Flat Bottom..... | 11 ft. 10 in. (3.60 m)                    | 13 ft. 9 in. (4.18 m)                      |
| <b>C</b> Maximum Cutting Height .....                                 | 22 ft. 4 in. (6.81 m)                     | 23 ft. 7 in. (7.18 m)                      |
| <b>D</b> Maximum Dumping Height .....                                 | 15 ft. 9 in. (4.79 m)                     | 16 ft. 10 in. (5.14 m)                     |
| <b>E</b> Minimum Swing Radius.....                                    | 9 ft. (2.74 m)                            | 9 ft. 6 in. (2.90 m)                       |
| <b>F</b> Maximum Vertical Wall .....                                  | 11 ft. 4 in. (3.45 m)                     | 13 ft. 3 in. (4.03 m)                      |
| <b>G</b> Tail Swing Radius .....                                      | 4 ft. 3 in. (1.29 m)                      | 4 ft. 11 in. (1.49 m)                      |



## Machine Dimensions

|   | <i>Arm Length</i>     | <i>Arm Length</i>     |
|---|-----------------------|-----------------------|
| <b>A</b> Overall Length .....                             | 5 ft. 4 in. (1.62 m)  | 6 ft. 11 in. (2.12 m) |
| <b>B</b> Overall Height .....                             | 22 ft. (6.70 m)       | 22 ft. 4 in. (6.81 m) |
| <b>C</b> Overall Width:                                   |                       | 8 ft. 4 in. (2.55 m)  |
| 24-in. (600 mm) Triple Semi-Grouser Shoes .....           | 8 ft. 1 in. (2.47 m)  |                       |
| Track Height .....  | 26 in. (0.65 m)       |                       |
| 18-in. (450 mm) Rubber Crawler Pad .....                  | 7 ft. 7 in. (2.32 m)  |                       |
| 18-in. (450 mm) Rubber Crawler Belt .....                 | 7 ft. 7 in. (2.32 m)  |                       |
| <b>D</b> Rear-End Length/Swing Radius .....               | 4 ft. 11 in. (1.49 m) |                       |
| <b>E</b> Distance Between Idler/Sprocket Centerline ..... | 7 ft. 6 in. (2.29 m)  |                       |
| <b>F</b> Undercarriage Length .....                       | 9 ft. 7 in. (2.92 m)  |                       |
| <b>G</b> Counterweight Clearance .....                    | 30 in. (0.76 m)       |                       |
| <b>H</b> Cab Height .....                                 | 8 ft. 10 in. (2.69 m) |                       |
| <b>I</b> Ground Clearance .....                           | 14 in. (360 mm)       |                       |
| <b>J</b> Upperstructure Width .....                       | 7 ft. 7 in. (2.32 m)  |                       |
| <b>K</b> Gauge Width .....                                | 6 ft. 2 in. (1.87 m)  |                       |
| <b>L</b> Blade Lift Height .....                          | 15 in. (380 mm)       |                       |
| <b>M</b> Blade Cut Below Grade .....                      | 11 in. (280 mm)       |                       |
| <b>N</b> Blade Lift Angle .....                           | 27 deg.               |                       |
| Blade Height .....  | 18 in. (460 mm)       |                       |
| Blade Width .....   | 8 ft. 1 in. (2.47 m)  |                       |

### ZAXIS 85USB-3



## Lifting Capacities

**Boldface italic** type indicates hydraulic-limited capacities; lightface type indicates stability-limited capacities, in lb. (kg). Ratings at bucket lift hook; machine equipped with 12-ft. 2-in. (3.67 m) boom, 0.37-cu.-yd. (0.28 m<sup>3</sup>) bucket; and situated on firm, uniform supporting surface. Total load includes weight of cables, hook, etc. Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine. All lift capacities are based on SAE J1097.

| Load Point Height   | 10 ft. (3.05 m)     |              | 15 ft. (4.57 m)     |              | 20 ft. (6.10 m)     |             |
|---|---------------------|--------------|---------------------|--------------|---------------------|-------------|
|   | Over Front          | Over Side    | Over Front          | Over Side    | Over Front          | Over Side   |
| With 5-ft. 4-in. (1.62 m) arm, either 18-in. (450 mm) rubber crawler pads or 18-in. (450 mm) rubber crawler belt, and 7-ft. 7-in. (2.32 m) blade on ground  |                     |              |                     |              |                     |             |
| 15 ft. (4.57 m)   |                     |              | <b>3,595 (1631)</b> | 3,446 (1563) |                     |             |
| 10 ft. (3.05 m)   |                     |              | <b>4,176 (1894)</b> | 3,311 (1502) | <b>3,525 (1599)</b> | 1,978 (897) |
| 5 ft. (1.52 m)  |                     |              | <b>5,540 (2513)</b> | 3,018 (1369) | <b>3,959 (1796)</b> | 1,895 (860) |
| Ground Line   |                     |              | <b>6,247 (2834)</b> | 2,822 (1280) | <b>4,167 (1890)</b> | 1,813 (822) |
| -5 ft. (-1.52 m)  | <b>6,326 (2869)</b> | 5,393 (2446) | <b>5,703 (2587)</b> | 2,796 (1268) |                     |             |
| With 6-ft. 11-in. (2.12 m) arm, either 18-in. (450 mm) rubber crawler pads or 18-in. (450 mm) rubber crawler belt, and 7-ft. 7-in. (2.32 m) blade on ground |                     |              |                     |              |                     |             |
| 10 ft. (3.05 m)   |                     |              | <b>3,604 (1635)</b> | 3,429 (1555) | <b>3,304 (1499)</b> | 2,069 (938) |
| 5 ft. (1.52 m)  |                     |              | <b>5,117 (2321)</b> | 3,155 (1431) | <b>3,772 (1711)</b> | 1,973 (895) |
| Ground Line   |                     |              | <b>6,219 (2821)</b> | 2,931 (1329) | <b>4,179 (1896)</b> | 1,876 (851) |
| -5 ft. (-1.52 m)  | <b>8,733 (3961)</b> | 5,452 (2473) | <b>6,117 (2775)</b> | 2,861 (1298) | <b>3,989 (1809)</b> | 1,841 (835) |
| -10 ft. (-3.05 m)   | <b>6,901 (3130)</b> | 5,593 (2537) | <b>4,473 (2029)</b> | 2,926 (1327) |                     |             |

# ZAXIS 85USB-3 SPECIFICATIONS

## Lifting Capacities (continued)

**Boldface italic** type indicates hydraulic-limited capacities; lightface type indicates stability-limited capacities, in lb. (kg). Ratings at bucket lift hook; machine equipped with 12-ft. 2-in. (3.67 m) boom, 0.37-cu.-yd. (0.28 m<sup>3</sup>) bucket; and situated on firm, uniform supporting surface. Total load includes weight of cables, hook, etc. Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine. All lift capacities are based on SAE J1097.

| Load Point Height   | 10 ft. (3.05 m)     |              | 15 ft. (4.57 m)     |              | 20 ft. (6.10 m)     |             |
|---|---------------------|--------------|---------------------|--------------|---------------------|-------------|
|   | Over Front          | Over Side    | Over Front          | Over Side    | Over Front          | Over Side   |
| With 5-ft. 4-in. (1.62 m) arm, 24-in. (600 mm) triple semi-grouser shoes, and 8-ft. 1-in. (2.47 m) blade on ground  |                     |              |                     |              |                     |             |
| 15 ft. (4.57 m)   |                     |              | <b>3,595 (1631)</b> | 3,534 (1603) |                     |             |
| 10 ft. (3.05 m)   |                     |              | <b>4,176 (1894)</b> | 3,399 (1542) | <b>3,525 (1599)</b> | 2,040 (925) |
| 5 ft. (1.52 m)  |                     |              | <b>5,540 (2513)</b> | 3,106 (1409) | <b>3,959 (1796)</b> | 1,957 (888) |
| Ground Line   |                     |              | <b>6,247 (2834)</b> | 2,910 (1320) | <b>4,167 (1890)</b> | 1,875 (850) |
| -5 ft. (-1.52 m)  | <b>6,326 (2869)</b> | 5,545 (2515) | <b>5,703 (2587)</b> | 2,884 (1308) |                     |             |
| With 6-ft. 11-in. (2.12 m) arm, 24-in. (600 mm) triple semi-grouser shoes, and 8-ft. 1-in. (2.47 m) blade on ground |                     |              |                     |              |                     |             |
| 10 ft. (3.05 m)   |                     |              | <b>3,604 (1635)</b> | 3,441 (1561) | <b>3,304 (1499)</b> | 2,077 (942) |
| 5 ft. (1.52 m)  |                     |              | <b>5,117 (2321)</b> | 3,167 (1437) | <b>3,772 (1711)</b> | 1,981 (899) |
| Ground Line   |                     |              | <b>6,219 (2821)</b> | 2,942 (1334) | <b>4,179 (1896)</b> | 1,885 (855) |
| -5 ft. (-1.52 m)  | <b>8,733 (3961)</b> | 5,472 (2482) | <b>6,117 (2775)</b> | 2,873 (1303) | <b>3,989 (1809)</b> | 1,849 (839) |
| -10 ft. (-3.05 m)   | <b>6,901 (3130)</b> | 5,613 (2546) | <b>4,473 (2029)</b> | 2,938 (1333) |                     |             |

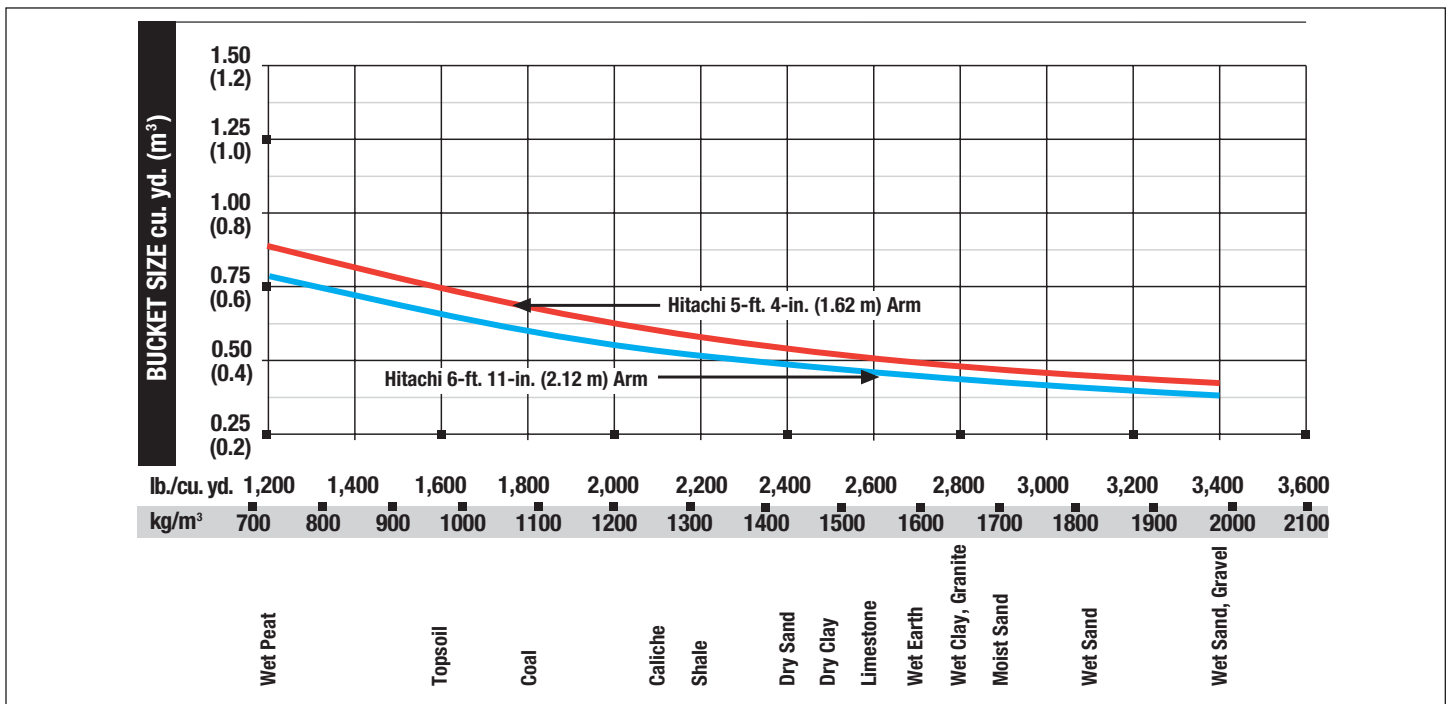
## Buckets

A full line of buckets is offered to meet a wide variety of applications. Several tooth selections are available including the ESCO (Vertalok) Standard, Tiger, Twin Tiger, or Flare tooth. Replaceable cutting edges are available through parts. Optional side cutters add 6 inches (150 mm) to bucket widths.

| Type Bucket | Bucket Width |      | Bucket Capacity* |                | Weight |     | Bucket Dig Force |      | Arm Dig Force 5 ft. 4 in. (1.62 m) |      | Arm Dig Force 6 ft. 11 in. (2.12 m) |      | Bucket Tip Radius |      | No. Teeth |
|-------------|--------------|------|------------------|----------------|--------|-----|------------------|------|------------------------------------|------|-------------------------------------|------|-------------------|------|-----------|
|             | in.          | mm   | cu. yd.          | m <sup>3</sup> | lb.    | kg  | lb.              | kN   | lb.                                | kN   | lb.                                 | kN   | in.               | mm   |           |
| Heavy-Duty  | 24           | 610  | 0.40             | 0.31           | 633    | 287 | 12,061           | 54.0 | 8,491                              | 38.0 | 7,162                               | 32.0 | 42.80             | 1087 | 5         |
|             | 30           | 762  | 0.53             | 0.41           | 735    | 333 | 12,061           | 54.0 | 8,491                              | 38.0 | 7,162                               | 32.0 | 42.80             | 1087 | 6         |
|             | 36           | 914  | 0.66             | 0.50           | 837    | 380 | 12,061           | 54.0 | 8,491                              | 38.0 | 7,162                               | 32.0 | 42.80             | 1087 | 7         |
| Ditching    | 48           | 1219 | 0.64             | 0.49           | 727    | 330 | 14,344           | 64.0 | 8,911                              | 40.0 | 7,473                               | 33.0 | 35.69             | 907  | 0         |

\*All capacities are SAE heaped ratings.

## Bucket Selection Guide\*



\*Contact your Hitachi dealer for optimum bucket and attachment selections. These recommendations are for general conditions and average use. Does not include optional equipment such as thumbs or couplers. Larger buckets may be possible when using light materials, for flat and level operations, less compacted materials, and volume loading applications such as mass excavation applications in ideal conditions. Smaller buckets are recommended for adverse conditions such as off-level applications, rocks, and uneven surfaces. Bucket capacity indicated is SAE heaped.

## Equipment

Key ● Standard Equipment ▲ Optional or Special Equipment

### Engine

- Certified to EPA interim Tier-4 emissions
- Auto-idle system
- Batteries (two 12 volt), 100-min. reserve capacity
- Coolant recovery tank
- Dual-element dry-type air filter
- Electronic engine control
- Enclosed fan guard (conforms to SAE J1308)
- Engine coolant to -34 deg. F (-37 deg. C)
- Fuel filter with water separator
- Full-flow oil filter
- Turbocharger with charge air cooler
- Muffler, under hood, with vertical curved end exhaust stack
- Radiator, oil cooler, and intercooler with dust-protective net
- Glow-plug start aid
- 500-hour engine oil-change interval
- 70% (35 deg.) off-level capacity
- Isolation mounted
- Engine oil-drain coupler

### Hydraulic System

- Reduced-drift valve for boom down, arm in
- Auxiliary hydraulic valve section
- Spring-applied, hydraulically released automatic swing brake
- 5,000-hour hydraulic oil-change interval
- ▲ Auxiliary hydraulic lines
- ▲ Auxiliary pilot and electric controls
- ▲ Hydraulic filter restriction indicator kit
- ▲ Load-lowering control device
- ▲ Single-pedal propel control
- ▲ Control pattern-change valve

### Undercarriage

- Planetary drive with axial piston motors
- Propel motor shields
- Spring-applied, hydraulically released automatic propel brake
- Track guides, front idler
- Two-speed propel with automatic shift
- Upper carrier roller (1)
- Sealed and lubricated track chain

### Undercarriage (continued)

- Triple semi-grouser shoes, 24 in. (600 mm)
- Undercarriage with blade
- ▲ Rubber crawler pads, 18-in. (450 mm)
- ▲ Rubber belt, continuous, 18-in. (450 mm)

### Upperstructure

- Counterweight, 3,049 lb. (1383 kg)
- Right- and left-hand mirrors
- Vandal locks with ignition key: Cab door / Engine hood / Fuel cap / Service doors
- Remote-mounted engine oil and fuel filters

### Front Attachments

- Centralized lubrication system
- Dirt seals on all bucket pins
- Less boom and arm
- Oil-impregnated bushings
- Reinforced resin thrust plates
- Tungsten carbide thermal coating on arm-to-bucket joint
- ▲ Arm, 5 ft. 4 in. (1.62 m)
- ▲ Arm, 6 ft. 11 in. (2.12 m)
- ▲ Attachment quick-couplers
- ▲ Buckets: Ditching / Heavy duty / Heavy-duty high capacity / Side cutters and teeth
- ▲ Material clamps

### Operator's Station

- Adjustable independent control positions (seat-to-pedals)
- AM/FM radio
- Auto climate control/air conditioner, 20,000 Btu/hr. (5.9 kW), with heater and pressurizer
- Built-in operator's manual storage compartment and manual
- Cell-phone power outlet, 12 volt, 60 watt, 5 amp
- Coat hook
- Deluxe suspension cloth seat with 3-in. (76 mm) adjustable armrests
- Floor mat
- Front windshield wiper with intermittent speeds
- Gauges (illuminated): Engine coolant / Fuel
- Horn, electric
- Hour meter, electric
- Hydraulic shutoff lever, all controls

### Operator's Station (continued)

- Hydraulic warm-up control
- Interior light
- Large cup holder
- Machine Information Center (MIC)
- Mode selectors (illuminated): Power modes – two / Travel modes – two with automatic shift / Work mode – one
- Multifunction, color LCD monitor with: Diagnostic capability / Multiple-language capabilities / Maintenance tracking / Clock / System monitoring with alarm features: Auto-idle indicator, engine air cleaner restriction indicator light, engine check, engine coolant temperature indicator light with audible alarm, engine oil pressure indicator light with audible alarm, low-alternator-charge indicator light, low-fuel indicator light, fault-code alert indicator, fuel-rate display, wiper-mode indicator, work-lights-on indicator, and work-mode indicator
- Motion alarm with cancel switch (conforms to SAE J994)
- Auxiliary hydraulic control switches in right console lever
- SAE two-lever control pattern
- Seat belt, 2 in. (51 mm), retractable
- Tinted glass
- Transparent tinted overhead window
- Hot/cold beverage compartment
- ▲ Seat belt, 3 in. (76 mm), non-retractable
- ▲ Monitor system with alarm features: Hydraulic oil filter restriction indicator light
- ▲ 24- to 12-volt D.C. radio converters, 10 amp
- ▲ Circulation fan
- ▲ Protection screens for cab front, rear, and side
- ▲ Window vandal protection covers

### Electrical

- 50-amp alternator
- Blade-type multi-fused circuits
- Positive terminal battery covers
- ▲ ZLink™ wireless communication system

### Lights

- Work lights: Halogen / One mounted on boom / One mounted on frame

## Control Owning and Operating Costs

Customer Personal Service (CPS) is part of Hitachi's proactive, fix-before-fail strategy on machine maintenance that will help control costs, increase profits, and reduce stress. Included in this comprehensive lineup of ongoing programs and services are:

**Fluid analysis program** – tells you what's going on inside all of your machine's major components so you'll know if there's a problem before you see a decline in performance. Fluid analysis is included in most extended coverage and preventive-maintenance agreements.

**Component life-cycle data** – gives you vital information on the projected life span of components and lets you make informed decisions

on machine maintenance by telling you approximately how many hours of use you can expect from an engine, transmission, or hydraulic pump. This information can be used to preempt catastrophic downtime by servicing major components at about 80 percent of their life cycle.

**Preventive Maintenance (PM) agreements** – give you a fixed cost for maintaining a machine for a given period of time. They also help you avoid downtime by ensuring that critical maintenance work gets done right and on schedule. On-site preventive maintenance service performed where and when you need it helps protect you from the expense of catastrophic failures and lets you avoid waste-disposal hassles.

**Extended coverage** – gives you a fixed cost for machine repairs for a given period of time so you can effectively manage costs. Whether you

work in a severe-service setting or just want to spread the risk of doing business, this is a great way to custom-fit coverage for your operation. And an extended coverage contract also travels well because it's backed by Hitachi and is honored by all Hitachi construction dealers.

**Customer Support Advisors (CSAs)** – Hitachi believes the CSA program lends a personal quality to Customer Personal Service (CPS). Certified CSAs have the knowledge and skills for helping make important decisions on machine maintenance and repair. Their mission is to help you implement a plan that's right for your business and take the burden of machine maintenance off your shoulders.

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO9249. No derating is required up to 10,000-ft. (3050 m) altitude. Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, these specifications are based on a unit with standard equipment; 0.53-cu.-yd. (0.41 m<sup>3</sup>), 30-in. (762 mm), 735-lb. (333 kg) bucket; 24-in. (600 mm) triple semi-grouser shoes; 3,269-lb. (1483 kg) counterweight; 5-ft. 4-in. (1.62 m) arm; full fuel tank; and 175-lb. (79 kg) operator.