

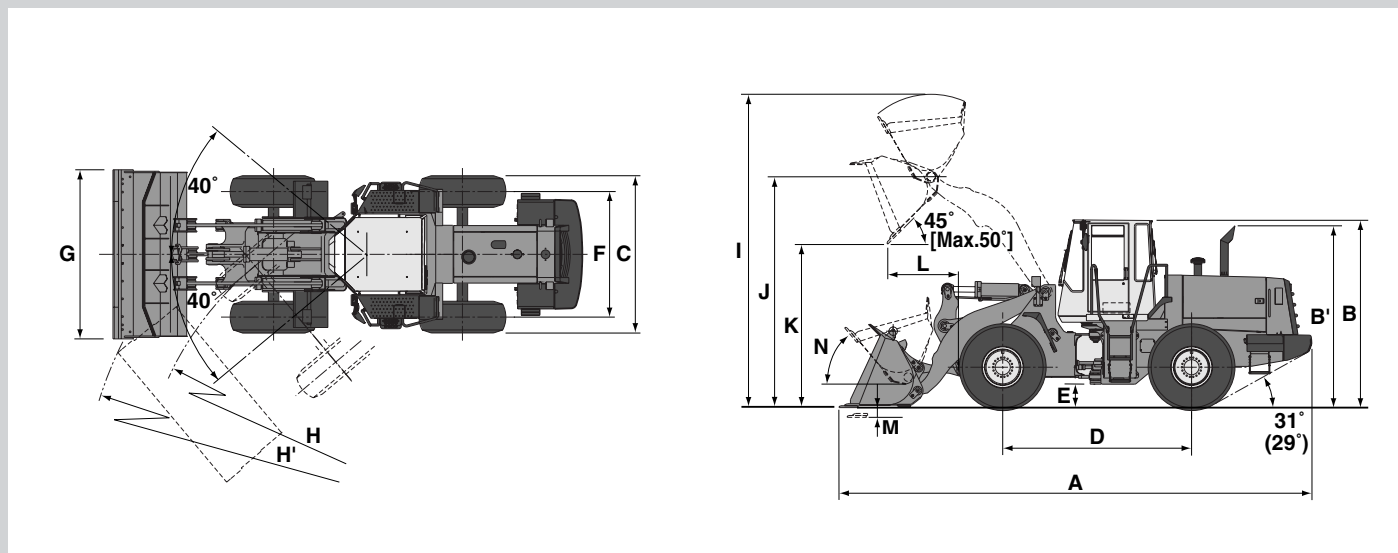
LX160

HITACHI

# LX160

W H E E L L O A D E R

- Engine Rated Power : 143 kW (195 PS)
- Operating Weight : 17 070 kg / 16 290 kg
- Bucket Capacity : ISO Heaped  
2.4 m<sup>3</sup> – 3.5 m<sup>3</sup>



Note: Values shown in ( ) are for optional 20.5 - 25 - 16PR tires.

Unit : mm

|  | LX160-7                                       |
|--|---|
| A Overall length                                     | 8 080 / 8 135                                 |
| B Height to top of cab                               | 3 305 / 3 240                                 |
| B' Height to top of exhaust                          | 3 170 / 3 105                                 |
| C Width over tires                                   | 2 810 / 2 720                                 |
| D Wheel base   | 3 250   |
| E Ground clearance                                   | 470 / 405                                     |
| F Tread  | 2 160   |
| G Bucket width                                       | 2 910   |
| H Turning radius (Centerline of outside tire)        | 5 560   |
| H' Loader clearance circle, bucket in carry position | 6 530   |
| I Overall operating height                           | 5 460 / 5 395                                 |
| J Height to bucket hinge pin, fully raised           | 4 040 / 3 975                                 |
| K Dumping clearance 45 degree, full height           | 2 875 / 2 810                                 |
| L Reach, 45 degree dump, full height                 | 1 180 / 1 240                                 |
| Reach, 45 degree dump, 7 ft (2.13 m) clearance       | 1 715 / 1 750                                 |
| M Digging depth (Horizontal digging angle)           | 100 / 165                                     |
| N Max. roll back at carry position                   | 50 deg.                                       |
| Tire size  | 23.5 - 25 - 16PR (L3) / 20.5 - 25 - 16PR (L3) |

Note: General purpose bucket with bolt on cutting edges.



## ENGINE

Model ..... Isuzu BB-6HK1T  
 Type ..... 4-cycle water-cooled, direct injection  
 Aspiration ..... Turbocharger  
 No. of cylinders ..... 6  
 Rated power  
   DIN 6 272, net ..... 141 kW (192 PS) at 2 200 min<sup>-1</sup> (2 200 rpm)  
   SAE J1349, net ..... 143 kW (192 HP) at 2 200 min<sup>-1</sup> (2 200 rpm)  
 Bore and stroke ..... 115 mm x 125 mm  
 Piston displacement ..... 7.790 L  
 Electrical system ..... 24 V with 0.96 kW, 50 A alternator  
 Starting system ..... 24 V x 5.0 kW electric motor  
 Batteries ..... 2 x 12 V / 916 CCA, 270-min. rated reserve  
 Air cleaner ..... Two element dry type with restriction indicator



## POWER TRAIN

Transmission ..... Torque converter, countershaft type powershift with computer-controlled automatic shift and manual shift features included.  
 Torque converter ..... Three element, single stage, single phase  
 Main clutch ..... Wet hydraulic, multi-disc type  
 Cooling method ..... Forced circulation type  
 Travel speed\* : km/h

|     | Forward / Reverse                    |  |
|-----|--------------------------------------|--|
| 1st | 7.0 / 7.5                            |  |
| 2nd | 11.5 / 13.0                          |  |
| 3rd | 20.5 / 22.5                          |  |
| 4th | 32.5 / 35.0                          |  |
|     | <i>*With 20.5-25-16PR (L3) tires</i> |  |
|     | Forward / Reverse                    |  |
| 1st | 7.5 / 8.5                            |  |
| 2nd | 12.5 / 14.0                          |  |
| 3rd | 22.5 / 24.5                          |  |
| 4th | 34.5 / 37.0                          |  |
|     | <i>*With 23.5-25-16PR (L3) tires</i> |  |



## AXLE AND FINAL DRIVE

Drive system ..... Four-wheel drive system  
 Front & rear axle ..... Semi-floating  
   Front : Fixed to the front frame  
   Rear : Trunnion support  
 Reduction and differential gear ..... Two stage reduction with torque proportional differential  
 Oscillation angle ..... ± 12° ; total 24°  
 Final drives ..... Heavy-duty planetary, mounted inboard



## TIRES (tubeless, nylon body)

Standard ..... 20.5-25-16PR (L3)  
 Optional ..... Refer to standard & optional equipment list



## BRAKES

Service brakes ..... Inboard mounted fully hydraulic 4 wheel wet disc brake.  
   Front & rear independent brake circuit  
 Parking brake ..... Wet multiple disc mechanical type built in transmission



## STEERING SYSTEM

Type ..... Articulated frame steering  
 Steering mechanism ..... Full hydraulic power steering with orbital  
 Steering angle ..... Each direction 40° ; total 80°  
 Relief pressure ..... 18.6 MPa (190 kgf/cm<sup>2</sup>)  
 Cylinders ..... Two double-acting piston type  
   No. x Bore x Stroke ..... 2 x 80 mm x 422 mm  
 Minimum turning radius at  
   the centerline of outside tire ..... 5.56 m



## HYDRAULIC SYSTEM

Arm and bucket are controlled by independent control lever  
 Arm controls ..... Four position valve ; Raise, hold, lower, float  
 Bucket controls with automatic bucket  
   return-to-dig control ..... Three position valve ; Roll back, hold, dump  
 Main pump ..... Gear type 107 L/min  
   @2 200 min<sup>-1</sup> (rpm) at 16 180 KPa (165 kgf/cm<sup>2</sup>)  
 Steering pump ..... Gear type 192 L/min  
   @2 200 min<sup>-1</sup> (rpm) at 20 590 KPa (210 kgf/cm<sup>2</sup>)  
 Brake and assist pump ..... Gear type 28 L/min  
   @2 200 min<sup>-1</sup> (rpm) at 6 370 KPa (65 kgf/cm<sup>2</sup>)  
 Charging pump ..... Double gear type with two discharge ports  
   Front pump ..... Front 84 L/min  
   @2 200 min<sup>-1</sup> (rpm) at 2 450 KPa (25 kgf/cm<sup>2</sup>)  
   Rear pump ..... Rear 50 L/min  
   @2 200 min<sup>-1</sup> (rpm) at 490 KPa (5 kgf/cm<sup>2</sup>)  
 Relief pressure setting ..... 20 590 KPa (210 kgf/cm<sup>2</sup>)  
 Hydraulic cylinders  
   Type ..... Two arm and one bucket, double acting type  
   No. x Bore x Stroke ..... Arm : 2 x 150 mm x 880 mm  
   Bucket : 1 x 190 mm x 505 mm  
 Filters ..... Full-flow 15 micron return filter in reservoir  
 Hydraulic cycle times  
   Lift arm raise ..... 6.0 s  
   lower ..... 3.3 s  
   Bucket dump ..... 1.4 s  
   Total ..... 10.7 s



## SERVICE REFILL CAPACITIES

Fuel tank ..... 265 L  
 Engine coolant ..... 63 L  
 Engine oil ..... 19 L  
 Torque convertor & transmission ..... 40 L  
 Front axle differential & wheel hubs ..... 32 L  
 Rear axle differential & wheel hubs ..... 32 L  
 Hydraulic reservoir ..... 97 L



## DIMENSIONS & SPECIFICATIONS

| Arm type  |                     |                | Standard arm               |                    |                               |                    |                               |                            |
|---|---------------------|----------------|----------------------------|--------------------|-------------------------------|--------------------|-------------------------------|----------------------------|
|   |                     |                | General purpose            |                    |                               | Rock bucket        |                               | Light material handling    |
|   |                     |                | With bolt-on cutting edges | With bolt-on teeth | With bolt-on teeth & segments | With bolt-on teeth | With bolt-on teeth & segments | With bolt-on cutting edges |
| Bucket capacity                                   | ISO heaped          | m <sup>3</sup> | 3.2                        | 3.1                | 3.2                           | 2.5                | 2.5                           | 3.5                        |
|   | ISO struck          | m <sup>3</sup> | 2.8                        | 2.6                | 2.7                           | 2.1                | 2.2                           | 3.0                        |
| Bucket width                                      |                     | mm             | 2 910                      | 2 910              | 2 910                         | 2 910              | 2 910                         | 2 910                      |
| Working range                                     |                     |                |                            |                    |                               |                    |                               |                            |
| Dumping clearance 45 degree, full height          |                     | mm             | 2 875                      | 2 770              | 2 770                         | 2 850              | 2 850                         | 2 835                      |
| Reach, 45 degree dump, full height                |                     | mm             | 1 180                      | 1 255              | 1 255                         | 1 170              | 1 170                         | 1 220                      |
| Reach, 45 degree dump, 7 ft (2.13 m) clearance    |                     | mm             | 1 715                      | 1 735              | 1 735                         | 1 695              | 1 695                         | 1 735                      |
| Reach with arm horizontal and bucket level        |                     | mm             | 2 590                      | 2 725              | 2 725                         | 2 610              | 2 610                         | 2 650                      |
| Digging depth (Horizontal digging angle)          |                     | mm             | 100                        | 115                | 115                           | 115                | 115                           | 100                        |
| Overall operating height                          |                     | mm             | 5 460                      | 5 460              | 5 460                         | 5 380              | 5 380                         | 5 520                      |
| Overall length (Bucket on ground)                 |                     | mm             | 8 080                      | 8 225              | 8 225                         | 8 110              | 8 110                         | 8 140                      |
| Loader clearance circle, bucket in carry position |                     | mm             | 6 530                      | 6 570              | 6 570                         | 6 540              | 6 540                         | 6 540                      |
| Static tipping load *                             | Straight            | kgf            | 15 200                     | 13 400             | 13 250                        | 12 850             | 12 700                        | 13 250                     |
|   | Full 40 degree turn | kgf            | 11 700                     | 11 550             | 11 400                        | 11 000             | 10 900                        | 11 400                     |
| Breakout force                                    |                     | kN<br>(kgf)    | 154<br>(15 700)            | 167<br>(17 000)    | 159<br>(16 200)               | 184<br>(18 800)    | 175<br>(17 900)               | 147<br>(15 000)            |
| Operating weight *                                |                     | kgf            | 17 000                     | 16 920             | 17 040                        | 17 440             | 17 560                        | 17 050                     |

| Arm type  |                     |                | High-lift arm              |                    |
|---|---------------------|----------------|----------------------------|--------------------|
|   |                     |                | General purpose            |                    |
|   |                     |                | With bolt-on cutting edges | With bolt-on teeth |
| Bucket capacity                                   | ISO heaped          | m <sup>3</sup> | 2.6                        | 2.5                |
|   | ISO struck          | m <sup>3</sup> | 2.2                        | 2.1                |
| Bucket width                                      |                     | mm             | 2 910                      | 2 910              |
| Working range                                     |                     |                |                            |                    |
| Dumping clearance 45 degree, full height          |                     | mm             | 3 430                      | 3 325              |
| Reach, 45 degree dump, full height                |                     | mm             | 1 190                      | 1 265              |
| Reach, 45 degree dump, 7 ft (2.13 m) clearance    |                     | mm             | 2 100                      | 2 130              |
| Reach with arm horizontal and bucket level        |                     | mm             | 2 845                      | 2 980              |
| Digging depth (Horizontal digging angle)          |                     | mm             | 200                        | 215                |
| Overall operating height                          |                     | mm             | 5 730                      | 5 730              |
| Overall length (Bucket on ground)                 |                     | mm             | 8 435                      | 8 580              |
| Loader clearance circle, bucket in carry position |                     | mm             | 6 690                      | 6 740              |
| Static tipping load *                             | Straight            | kgf            | 11 300                     | 11 400             |
|   | Full 40 degree turn | kgf            | 9 750                      | 9 800              |
| Breakout force                                    |                     | kN<br>(kgf)    | 161<br>(16 400)            | 175<br>(17 900)    |
| Operating weight *                                |                     | kgf            | 17 370                     | 17 290             |

Notes: 1. All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7131:1997 and ISO 7546:1983

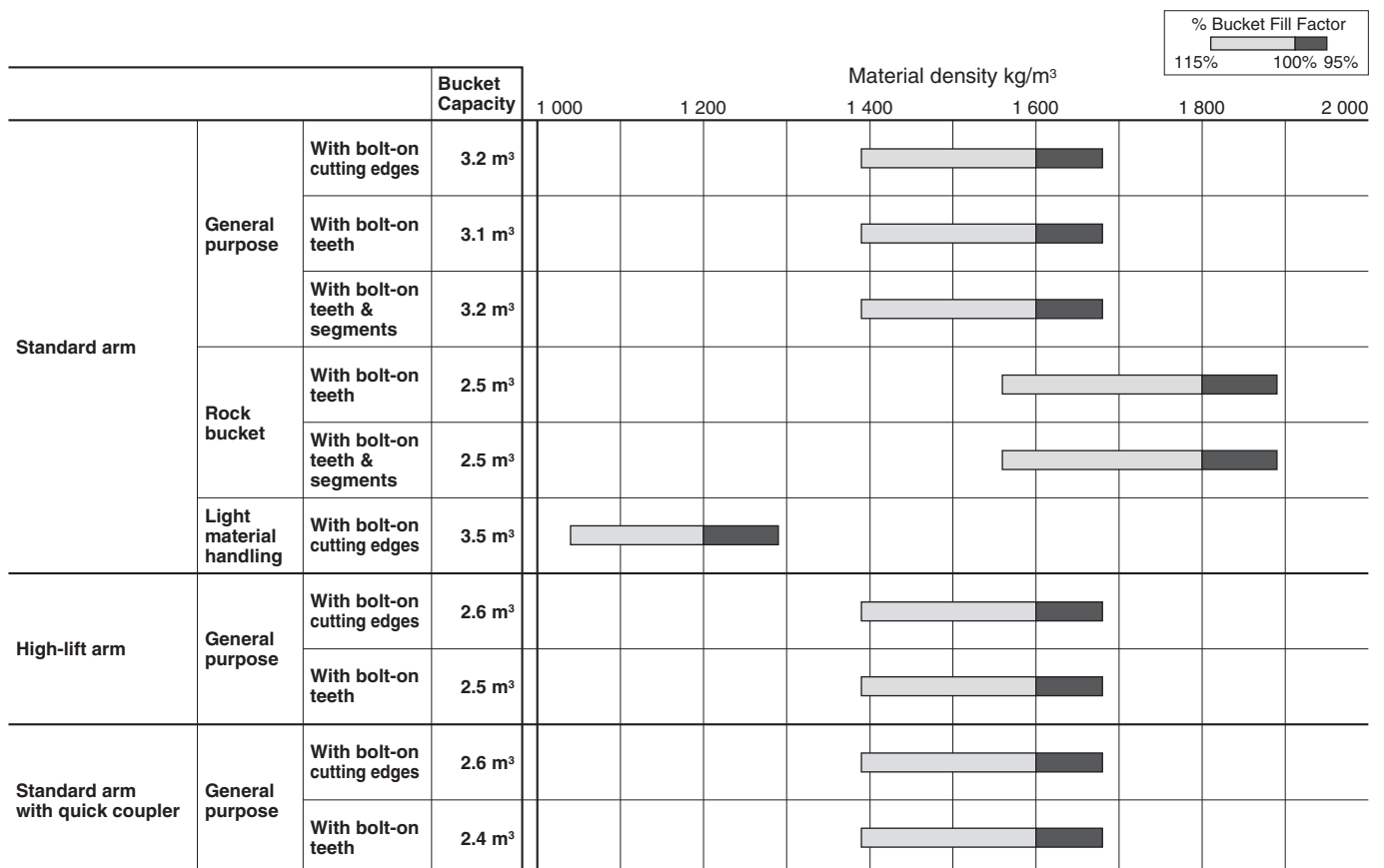
2. Static tipping load and operating weight marked with \* include 23.5-25-16PR (L3) tires (No ballast) with lubricants, coolant, full fuel tank and operator. Machine stability and operating weight depend on counterweight, tire size and other attachments.

| Tires and Options                           | Change in operating weight | Change in tipping load |           |
|---|----------------------------|------------------------|-----------|
|   |                            | Straight               | Full turn |
|   |                            | kg                     | kg        |
| 20.5-25-16PR (L2) Bias ply                  | - 836                      | - 640                  | - 570     |
| 20.5-25-16PR (L3) Bias ply                  | - 780                      | - 600                  | - 530     |
| 20.5-25-16PR (L4) Bias ply                  | —                          | —                      | —         |
| 20.5-25-16PR (L5) Bias ply                  | -264                       | - 200                  | - 180     |
| 23.5-25-16PR (L2) Bias ply                  | -88                        | - 60                   | - 50      |
| 23.5-25-16PR (L4) Bias ply                  | —                          | —                      | —         |
| 20.5 R25 (L3 type) Radial ply               | - 452                      | - 350                  | - 310     |
| 20.5 R25 (L5 type) Radial ply               | —                          | —                      | —         |
| 23.5 R25 (L3 type) Radial ply               | 308                        | 230                    | 200       |
| 23.5 R25 (L5 type) Radial ply               | —                          | —                      | —         |
| FRP roof canopy (In lieu of ROPS/FOPS cab)  | —                          | —                      | —         |
| ROPS/FOPS canopy (In lieu of ROPS/FOPS cab) | —                          | —                      | —         |
| Lumber and pallet fork (Pin on type)        | —                          | —                      | —         |
| Log grapple (Pin on type)*                  | 660                        | 340                    | 300       |
| Lumber grapple (Pin on type)                | —                          | —                      | —         |
| Counterweight, CW*A                         | 280                        | 730                    | 650       |
| Counterweight, CW*B                         | 450                        | 960                    | 850       |

Note: \* With counterweight CW\*A, counterweight CW\*B and 20.5-25-20PR (L3) tires



## BUCKET SELECTION GUIDE



## STANDARD & OPTIONAL EQUIPMENT

|  |   |  |   |  |   |
|--|---|--|---|--|---|
| <b>ENGINE</b>  |   | Indicator lights: Turn signals / Warning flashers / High beam of driving light / Work lights / Park brake / Clutch cut off / Gear shift / Engine preheat | ● | Rock bucket with bolt on teeth: 2.5 m <sup>3</sup> (ISO heaped)  | □ |
| Coolant recovery tank  | ● | Indicator lights: Emergency steering (If Emergency steering is equipped)   | □ | Rock bucket with bolt on teeth and segments: 2.5 m <sup>3</sup> (ISO heaped)   | □ |
| Fan guard  | ● | 24-volt AM/FM stereo radio with clock  | ● | Light material handling bucket with bolt on cutting edges : 3.5 m <sup>3</sup> (ISO heaped)                                    | □ |
| Muffler, under hood with large exhaust stack   | ● | 24-volt AM/FM stereo radio with cassette player and clock  | □ | Quick coupler and hydraulic control system for quick-coupler locking pins, includes all controls in the cab, lines, and valves | □ |
| Environmentally friendly engine oil drain  | ● | Radio-ready cab, fused 24-volt radio electrical lead, speaker (2), and antenna*  | □ | Full line of Hitachi buckets for quick coupler with selection of bolt-on cutting edges, and bolt-on teeth*                     | □ |
| Engine oil cooler  | ● |  |   | General purpose bucket with bolt on cutting edges : 2.6 m <sup>3</sup> (ISO heaped)  | □ |
| Quick-release fuel filter and water separator  | ● | <b>OPERATOR'S STATION</b>  |   | General purpose bucket with bolt on teeth: 2.4 m <sup>3</sup> (ISO heaped)   | □ |
| Glow system (For cold start)   | ● | Canopy*  | □ | Full line of construction utility forks, pallet forks, and attachments*  | □ |
| Air filter double element  | ● | FRP roof / Multiplane isolation mount for noise/vibration reduction  | □ | Lumber and pallet fork : Max load 7 000 kg (Pin on type)   | □ |
| Air pre-cleaner  | ● | Cab  | ● | Log grapple : Max load 7 000 kg (Pin on type)  | □ |
| Wide fin radiator  | ● | ROPS** / FOPS*** / Multi-plane isolation mounted for noise/vibration reduction / Front and rear windshield washers / Safety grass                        | ● | Lumber grapple : Max load 7 000 kg (Pin on type)   | □ |
| Fuel double filter   | □ | Sun visor  | □ |  |   |
|  |   | Heater / Defroster (Cab model only)  | ● | <b>TIRES</b>   |   |
| <b>POWER TRAIN</b>   |   | Less Heater & Defroster (Cab model only)*  | ● | Bias ply :   |   |
| TC/PS transmission, computer-controlled automatic shift and manual shift features included               | ● | Air conditioning (Factory or dealer installed)   | □ | 20.5-25-16 PR (L2)   | □ |
| DSS (Down Shift Switch) and USS (Up Shift Switch)  | ● | Seat belt, 50 mm (2")  | ● | 20.5-25-16 PR (L3)   | □ |
| Torque proportioning differentials, front and rear   | ● | Seat belt, 76 mm (3"), with retractor*   | □ | 20.5-25-16 PR (L4)   | □ |
| Auto transmission 3 mode selection switch  | ● | Seat, close covered , high back, mechanical suspension, adjustable for weight-height, fore-aft position, backrest tilt, and armrest angle                | □ | 20.5-25-16 PR (L5)   | □ |
|  |   | Seat, fabric covered, high back, air suspension, adjustable for weight-height, fore-aft position, backrest tilt, and armrest angle*                      | □ | 23.5-25-16 PR (L2)   | □ |
| <b>HYDRAULIC SYSTEM</b>  |   | Seat backrest extension  | □ | 23.5-25-16 PR (L3)   | ● |
| Automatic bucket return-to-dig control   | ● | Lunch box tray   | □ | 23.5-25-16 PR (L4)   | □ |
| Automatic arm height kickout control   | ● | Rubber floor mat   | ● | Radial ply :   |   |
| Automatic arm return-to-carry control* (GSS: Ground Stop System)   | □ | Tilt steering  | ● | 20.5R25 (L3 type)  | □ |
| Reservoir sight gauge  | ● | Steering wheel, textured with spinner knob   | ● | 20.5R25 (L5 type)  | □ |
| Hydraulic filters, vertical mounting   | ● | Rear view mirrors, outside (2) and inside (2)  | ● | 23.5R25 (L3 type)  | □ |
| Two-function hydraulic valve with joystick control (Pilot controlled)*                                   | □ | Handholds and steps, ergonomically located and slip resistant  | ● | 23.5R25 (L5 type)  | □ |
| Two-function hydraulic valve with two levers   | ● | Cool box (Air-conditioner is necessary)  | □ | Multi-piece rims   | ● |
| Adjustable wristrest   | ● | Rear defroster (Cab model only)  | ● |  |   |
| Three-function hydraulic valve with two levers control and auxiliary lever for third function            | □ |  |   | <b>OTHERS</b>  |   |
| Ride control, automatic type   | □ | <b>LOADER LINKAGE</b>  |   | Fenders, front and rear  | ● |
|  |   | Z-bar loader linkage provides (High bucket breakout)   | ● | Articulation locking bar   | ● |
| <b>ELECTRICAL</b>  |   | High-lift arm*   | □ | Anti-vandal protection, includes lockable engine enclosure, and fuel fill  | ● |
| 24-volt electrical system  | ● |  |   | Counterweight, built-in  | ● |
| Standard batteries (2), 12 volt with 916 CCA, 270-min. rated reserve                                     | ● | <b>BUCKETS AND ATTACHMENTS</b>   |   | Counterweight, extra duty*   | □ |
| High-capacity batteries (2), 12 volt with 1045 CCA, 304-min. rated reserve                               | ● | Full line of Hitachi pin on buckets with selection of bolt-on cutting edges, and teeth-segmented bolt on edges*  | ● | Drawbar, with rocking pin  | ● |
| Alternator, 50 amps and 24 volts   | ● | General purpose bucket with bolt on cutting edges : 3.2 m <sup>3</sup> (ISO heaped)  | ● | Bottom guards, front frame and transmission  | □ |
| Alternator, high capacity, 90 amps and 24 volts  | ● | General purpose bucket with bolt on teeth: 3.1 m <sup>3</sup> (ISO heaped)   | □ | Bottom guards, engine*   | □ |
| Lights   | ● | General purpose bucket with bolt on teeth and segments : 3.2 m <sup>3</sup> (ISO heaped)   | □ | Lift and tie-down hooks  | ● |
| Driving with guards / Turn signals and flashers / Stop, tail and back-up lights                          | ● |  |   | Fire extinguisher (Dealer installed)   | □ |
| Work lights on cab, front (2)  | ● |  |   | Emergency steering*  | □ |
| Work lights, rear (2)  | ● |  |   | Open type rear grill*  | □ |
| Horn, with push button in center of steering wheel   | ● |  |   | Tropical pack* (For the hot weather condition)   | □ |
| Reverse warning alarm  | ● |  |   |  |   |
| Monitor and alarm system, multi-function electronic  | ● |  |   |  |   |
| Audible and visual warning include   | ● |  |   |  |   |
| Analog instruments: Engine coolant temperature / Transmission oil temperature / Fuel level / Speedometer | ● |  |   |  |   |
| Digital instrument: Hour-meter   | ● |  |   |  |   |
| Operator warning lights: Engine oil pressure / Engine air filter / Engine preheat                        | ● |  |   |  |   |
| Alternator voltage (Charge)  | ● |  |   |  |   |

Note: ● Standard equipment □ Optional or special equipment

\* : Please consult your Hitachi dealer for further information

\*\* : ROPS (Roll Over Protective Structure) Conforms to ISO 3471;1994

\*\*\* : FOPS (Falling Objects Protective Structure) Conforms to ISO 3449; 1992 Level II

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*These specifications are subject to change without notice.  
Illustrations and photos show the standard models, and may or may not include optional  
equipment, accessories, and all standard equipment with some differences in color and features.  
Before use, go through Operators Manual for proper operation.*

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