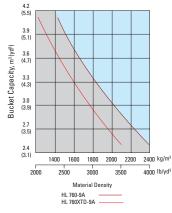
#### **BUCKET SELECTION GUIDE**

#### SUPPLEMENTAL SPECIFICATIONS

Description

20.5-25 16PR L3

23.5 R25 XHA\*



oil, t/m oil)

Switches

- hazard

Lighting system

- 4 turn signals

- clutch cut-off

- main light

- parking

- 1 LED dome lights

- 2 stop and tail lights

- brake lights (counterweight)

(illumination and head light)

- 2 working lights on grill

#### **STANDARD EOUIPMENT**

#### Electrical system

Alternator, 70A Alarms, audible and visual - air filter clogging - transmission erro - alternator voltage - brake oil pressure - engine oil pressure - parking brake - fuel level - hydraulic oil temperature - coolant temperature - service brake oil pressure Alarm, back-up Batteries, 900 CCA, 12V, (2) Gauges - engine coolant temperature - fuel level - hydraulic oil temperature speedometer - transmission oil temperature - voltmeter Horn, electric Indicator lights - clutch cut-off

- high beam
- turn signal
- LCD Display
- clock and fault code
- operating hour counter
- engine rpm
- transmission gear range indicator - job time and distance

#### **OPTIONAL EQUIPMENT**

24-volt to 12-volt DC converter 3 Spool valve with lever Beacon light, rotating Auxiliary, 2 working lights on front roof (Xenon working lights) Auxiliary, 2 working lights on rear roof Cutting edge, bolt-on type Dual brake pedal Secondary steering system Fenders (rear-mudguard) Fire extinguisher

- rear wiper & washer work light - battery master switch - pilot cut-off Starter, electric Starting and charging system (24volt) Cab Cab, ROPS/FOPS (sound suppressed and pressurized) with - cigar lighter & ashtray - coat hook Automatic climate control - air conditioner & heater

- temperature (coolant, hydraulic - defroster intermittent wiper and washer front and rear Personal storage space - console box - holder, can and cup Rear view mirrors (1 inside) - 2 head lights on front tower Rear view mirrors (2 outside) - 2 working lights on front roof 2" retractable seat belt & adjustable suspension seat with armrests Steering column, tilt and telescopic Steering wheel with knob Ignition key, start/stop switch Roller type sunshade (front window) Tinted safety glass Two door cab Magazine pocket Pedals - one accelerator pedal - one brake pedal Radio/USB player (bluetooth) Rubber floor mat Wrist rest

#### Engine

Antifreeze Engine, Cummins QSB6.7 low emission diesel. tier 4 interim, stage III-B DPF - clean emission aftertreatment module

Engine fuel priming pump 3 operating mode (power / standard / economy) Fan guard Fuel/water separator Fuel warmer Under hood with exhaust stack Direct air flow filter w/pre cleaner Radiator Starting aid (air intake heater) Water sensor on fuel filter **Power Train** Brakes : Service, enclosed wet-disc Parking brake Torque converter Transmission, F4 / R3 computer-controlled, electronic

Change in operating

weight kg(lb)

-872 (-1,922)

+8 (+18)

#### Hydraulics

Tool kit

Boom kickout, automatic Bucket positioner, automatic Diagnostic pressure taps Hydraulic oil cooler Hydraulic system. - 2 spool, single lever, pilot control for boom and bucket actuation Steering, load-sensing Remote cooling fan,

soft shift, auto-shift and

Transmission oil cooler

kick down shift features included

hvdraulicallv-driven. Engine enclosure, lockable temperature sensing type Others Articulation locking bar

Change in static tipping Change in static tipping

load-40° turn kg(lb)

-590 (-1,300)

+5 (+11)

load-straight kg(lb)

-670 (-1,470)

+6 (+13)

Counterweight Door and cab locks, one key Doors, service access (locking) Drawbar with pin Engine oil level dipstick gauge Ergonomically located and slip resistant, left & right - handrails - ladders - platforms - steps Fenders (front / rear) Guard, bucket cylinder rod Hydraulic oil level sight gauge License plate bracket Lift and tie-down hooks Loader linkage, sealed Z-Bar design Steering stops, cushioned Tires (26.5-25, 20PR,L3) Transmission oil sight level Vandalism protection caplocks Reversible cooling fan

High lift arrangement with additional counterweight. 520kg (1,146 lb) Hydraulic control, 2 levers Hydraulic control, 3 levers 3rd spool for auxiliary function Joystick with travel switch (FNR)

Mud guard

Pallet forks

Operator suit

Heated rear view mirrors

(2 outside) Ride control system Seat - 2" static seat belt & adjustable mechanical suspension (vinyl) - 3" static seat belt & adjustable mechanical suspension - 2" retractable seat belt & adjustable air suspension (heated) Tires : - 23.5 - 25, 20PR, L3

- 26.5 - 25, 28PR, L3 - 26.5 - 25. 32PR. L3 - 26.5 - 25, 20PR, L5 - 26.5 R25 XHA\* Tooth, 1 piece, bolt-on type Tooth, 2 pieces, bolt-on type Wheel chock Joystick-steering Roller type sunshade (rear window) License plate & lamp

Hi-Mate (Remote Management System) Rearview camera Limited slip differential (front, rear) Hyd. lock differential (front) Transmission, F5 / R3 with lock up clutch Smart key system Guards-transmission

Standard and optional equipment may vary. Contact your Hyundai dealer for more information. The machine may vary according to international standards. All imperial measurements rounded off to the nearest pound or inch.

#### PLEASE CONTACT

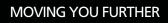


6100 Atlantic Blvd Norcross, GA 30071 TEL: (678) 823 7777 FAX: (678) 823 7778

# **HL760**-9A With Tier 4 Interim Engine installed



2013.14 Rev 0





# **PRIDE AT WORK**

Hyundai Heavy Industries strives to build state-of-the art earthmoving equipment to give every operator maximum performance, more precision, versatile machine preferences, and proven quality. *Take pride in your work with Hyundai!* 



Engine Technology QSB6.7 engine

Clutch gap

# Improved Visibility

and overload prevention

## Serviceability

# **HL760**-9A

## Machine Walk-Around

### **Reliable Main Components**

- Proven, reliable, fuel efficient, low emission, low noise Cummins Tier 4 Interim & EU Stage IIIB
- Electronically controlled for optimum fuel to air ratio and clean, efficient combustion
- HPCR (High Pressure Common Rail) fuel system / Self-diagnostic system
- DPF Clean emission aftertreatment module
- 3 engine modes, P (Power), S (Standard), E (Economy), for full power or reduced fuel consumption according to operator preference

#### **Fully Automatic Transmission**

- 4 step shift modes (Manual / Light / Normal / Heavy) for different working conditions
- Protective transmission at low temperature (Automatic warm-up system)
- Self-diagnostic & Memory of malfunction history
- Minimum travel shift shock by applying proportional controlling modulation valve / Self adjusting
- Kick-down button & FNR switch for operating comfort
- Self-adjusting & wheel speed wet disc brake

### Improved Durability

- Load sensing hydraulic system with variable displacement piston pump and
- closed-center MCV (main control valve)
- Long-life cooling system with relocated cooling fan & radiator, designed for additional durability;
- resistant to thermal shock, impulse and vibration
- Redesigned steering cylinder lug and bucket link, now cast steel for additional strength and reliability

### **Enhanced Operator Comfort**

- Larger operator's cab for additional comfort
- Redesigned cab with rounded front glass and larger door glass for a larger field of view

#### Improved Convenience

- Increased cooling & heating capacity with fully automatic climate control system
- Tilting & telescopic steering column
- Adjustable wrist rest for reduced operating stress
- Multiple storage compartments
- AM/FM Radio with MP3 interface and USB input and bluetooth hands-free
- Improved ladder with 20 degree incline and large, deep tread, aluminum cast steps for safer access and exit from the cab

#### Advanced 5.7" Color Monitor with Touch Screen

- Easy-to-read new color LCD display equipped with natural screen movement
- Newly designed multimedia function for an enjoyable work experience
- Auto boom kick out and bucket positioner fully adjustable from within the cab
- Integrated load weighing system, viewable through the monitor, for improved work efficiency
- Self diagnostic & monitoring system with active display of engine, hydraulic system,
- transmission and electrical component information
- Color, rear-view back-up camera for improved safety and convenience
- The tilting transmission and hydraulic oil coolers swing open for easy access and regular maintenance Ground level access to critical service points, filters and sight gauges for easy maintenance Long life hydraulic filter and oil for reduced operating costs

# **PRECISION & PERFORMANCE**

Innovative hydraulic system technologies make the 9A series wheel loaders fast, smooth and easy to control. 9A series is designed for maximum performance to keep the operator working productively.



**Improved Durability & Reliability** 

## Variable Operating Modes



9A series wheel loaders are designed to allow the operator to customize the machine's engine power, automatic transmission shift timing and clutch cut-off activation based on the job condition and personal operator preference. Convenient rotary type switches allow for easy adjustment of the engine power mode, transmission power shift mode, and clutch cut-off mode. Additionally, the optional ride control system has shock absorbing accumulators that cushion the boom, improve operator comfort and reduce material loss. The versatility of the 9A series operating modes contributes to improved productivity, enhanced operator comfort and reduced fuel consumption.



3 Mode Engine Power Selection P (Power) Mode : Heavy duty work S (Standard) Mode : General work E (Economy) Mode : Light duty work

M (Manual) Mode



The CUMMINS QSB6.7 engine combines advanced electronic controls and a self-diagnostic system with reliable performance. The combination of a high pressure common rail system and an advanced in-cylinder combustion technology results in increased power, improved transient response and reduced fuel consumption. The QSB6.7 Cummins engine complies with current emissions standards including EPA Tier 4 interim and EU Stage III-B.

Wall-Flow DPF (Diesel Particulate Filter) DOC (Diesel Oxidation Catalyst)

DPF - Clean Emission Aftertreatment Module DPF - Robust Clean Emission Aftertreatment Module - contains a DOC (Diesel Oxidation Catalyst) and DPF (Diesel Particulate Filter). High efficient DPF reduces more than 90% of particulate matter. Regeneration, the process by which soot is removed from DPF, is automatically done in both passive and active way depending on the soot level and does not interrupt the daily machine operation. The operator can also initiate regeneration manually or disable regeneration on the job.



# Fully Automatic Transmission

Fully automatic transmission designed for maximum durability, minimum power loss, improved travel speed and low noise. Improved clutch control and minimized shifting shock when traveling contribute to a smoother ride. Error messages and transmission faults are recorded and accessible through the monitor.



Complete with a New 5 Speed & Lock up Clutch (Option) By using the 5 speed & Lock up Clutch, the operator can enjoy both the reduction of consumption and the use of various gears depending on the working condition.

An enhanced axle improves driving over variable ground conditions. Self-adjusting brakes automatically regulate disc clearance, reduce service time and improve brake reliability and performance. The new load sensing hydraulic system with a variable displacement piston pump and closed center main control valve provide efficient hydraulic power and additional energy savings.

# 4 Mode Transmission Power Shift System

Auto L (Light) Mode : Light duty & long distance carry Auto N (Normal) Mode : General excavating & loading Auto H (Heavy) Mode : Heavy duty excavating & loading

#### 3 Mode Clutch Cut-Off System L (Low) Mode : Short distance & faster loading M (Medium) Mode : General loading H (High) Mode : Slope ground

## Eco-friendly Cummins QSB 6.7 Engine



VGT (Variable Geometry Turbocharger) Newly designed VGT with electric actuator delivers optimum air flow resulting in cleaner exhaust gas, quick transient acceleration and improved fuel economy by combining the benefits of low

& high engine speed.



# **OPERATOR COMFORT**

Operating a 9A series wheel loader is unique to every operator. Operators can fully customize their work environment and operating preferences to fit their individual needs.



\*Photo may include optional equipme

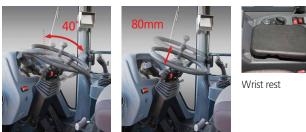
#### Wide and Convenient Cab

The newly designed cabin has more space, a wider field of view and operator comfort. The front windshield is rounded and 17% wider than our previous series. Special attention was given to a clean, open and convenient interior with wide visibility of the machine surroundings and the job at hand. This well-balanced combination of cab ergonomics puts the operator in a perfect position to work safely and conveniently. The 9A series cab's fully automatic climate control system features 11 air vents and increased cooling and heating capacity for optimum temperature control. The defroster vents located at the front and rear windows and the PTC (electric pre-heater) makes working in cold weather more comfortable.

# Operator Comfort

In the 9A series cabin you can easily adjust the steering column and wrist rest to best suit your preferred comfort level. Pilot-operated joystick controls are easy and comfortable to operate. An FNR (Forward/ Neutral/Reverse) switch on the control lever facilitates easy selection of travel direction. Roller type sunshades on the front and rear window allow the operator to reduce glare and improve visibility. Heated side mirrors feature built-in hot wires for guick

defrosting in cold weather conditions.



Tilting / telescopic steering column

## **Reduced Stress**

Hyundai's 9A series cabin offers many amenities, additional space and a comfortable seat to minimize stress of the operator. A powerful climate control system provides the operator with optimum air temperature. An advanced audio system with AM/ FM stereo, MP3 interface and USB input, plus remotely located controls, is perfect for listening to your favorite music.

## Advanced Color Monitor



The advanced new monitor with 5.7-inch wide color LCD with touch screen allows the operator to easily and efficiently control the machine. The operator can adjust boom kick-out and bucket position via overhead switches while monitoring the adjustment settings through the monitor. An integrated load weighing system that contributes to improved work efficiency can also be viewed through the monitor. Self-diagnostics, color rear-view camera maintenance check lists and start-up machine security were integrated into the monitor to make the machine more versatile and the operator more productive. The new monitor display unit is mounted on an adjustable swivel to reduce glare and position according to operator preference. Also, the newly designed multimedia menu provides a music & video player function for an enjoyable work experience.

## Monitor Tilt Range











FNR switch



Rear sunshade (Option)



Heated side mirrors (Option)



AM/FM Radio with MP3 and Bluetooth Hands-free / AC control

## Smart Key System (Option)



User authentication and anti-theft system are reinforced with smart key system (optional). This allows the operator to start the engine with the push of a starter button rather than inserting a key into the ignition.



# PROFITABILITY

9A series is designed to maximize profitability through improved efficiencies, enhanced service features and longer life components.



\*Photo may include optional equipment.



## Hi-mate (Remote Management System)

Hi-mate, Hyundai's proprietary remote management system, provides operators and dealer service personnel access to vital service and diagnostic information on the machine from any computer with internet access. Users can pinpoint machine location using digital mapping and set machine work boundaries, reducing the need for multiple service calls. Hi-mate saves time and money for the owner and dealer by promoting preventative maintenance and reducing machine downtime.



# Remote-mounted Cooling Fan

The remote mounted, hydraulically powered cooling fan regulates fan speed according to working temperatures for coolant, intake air, transmission oil and hydraulic oil. The fan drive with variable piston pump contributes to reduce fuel consumption and improve cooling capacity. The fan is designed to auto reverse periodically or manually reverse to keep debris from accumulating in the coolers.



# Extended Life Components

The 9A series is designed for longer lubrication intervals and extended component life. Long life hydraulic filters now have 1,000 hours service intervals and Hyundai certified hydraulic oil can last up to 5,000 hours before changing. Also, a new center pivot roller bearing design, now double tapered, requires less maintenance as well. Long life and extended wear components save the operator time and money.

Hydraulic filter (1,000 hr) Hydraulic Oil (5,000 hr)



# Easy Access

The tilting transmission and hydraulic oil coolers swing open for easy access and regular maintenance, and the rear door can be open to over 90 degrees. Conveniently located transmission oil site gauges make checking fluid levels fast and efficient. Ground-line access to fuel and oil filters grease fittings, fuses, machine computer components and wide open compartments makes service more convenient in the 9A series.



# Full Fenders and Mud Guards (Option)

9A series wheel loaders can be equipped with optional full rear mud guards to reduce material splatter to the cab and machine frame.

# **Specifications & Dimensions**

#### ENGINE

| Maker/Model      | CUMMINS QSB6.7  | Во       |
|------------------|---|----------|
| Waker/Woder      | COIVIIVIIIV3 Q3B0.7   | во       |
| Туре             | Watercooled, 4-cycle, turbocharged,                                       | Dis      |
|                  | charge aircooled direct injection,<br>electronic controlled diesel engine | Со       |
|                  |   | Air      |
| Gross power      | 255 HP (168 kW) / 2,100rpm  |          |
| Net power        | 222 HP (166 kW) / 2,100rpm  | Alt      |
|                  |   | Bat      |
| Maximum torque   | 97 kg·m (700 lb·ft) / 1,500rpm  | <u> </u> |
| No. of cylinders | 6   | Sta      |

| Bore x Stroke     | 107 mm (4.21") x 124 mm (4.88") |
|-------------------|---------------------------------|
| Displacement      | 6.7 <b>t</b> (409 cu in)        |
| Compression ratio | 17.3 : 1                        |
| Air cleaner       | Dry, two stage dual elements    |
| Alternator        | 24V, 70 Amp                     |
| Battery           | 2 x 12V, 130 Ah.                |
| Starting motor    | 24V, 7.8 kW                     |

\*\* No derating for continuous operating required up to 2,652m (8,700ft). This engine meets the EPA(Tier 4 interim) / EU(Stage II-B) Emission regulation.

#### TRANSMISSION

| Torque converter type | 3-elements, single-stage<br>single-phase |
|-----------------------|--|
| Tire                  | 23.5-25, L3                              |

%Full automatic power shift, countershaft type with soft-shift in range and direction. Properly matched torque converter to engine and transmission for excellent working ability

| Travel speed |     | km/h (mph)  |
|--------------|-----|-------------|
| Forward      | 1st | 6.3 (3.9)   |
|              | 2nd | 12.0 (7.5)  |
|              | 3rd | 24.0 (14.9) |
|              | 4th | 38.4 (23.9) |
| Reverse      | 1st | 6.7 (4.2)   |
|              | 2nd | 12.6 (7.8)  |
|              | 3rd | 25.2 (15.7) |

#### AXLES

| Drive system          | Four-wheel drive system                    |  |
|-----------------------|--|--|
| Mount                 | Rigid front axle and oscillating rear axle |  |
| Rear axle oscillation | $\pm 12^{\circ}$ (total 24°)               |  |

### HYDRAULIC SYSTEM

| Туре            | Load sensing hydraulic system              |  |
|-----------------|--|--|
| Pump            | Variable axial piston pump, 233 liters/min |  |
|                 | 61.6 gal/min                               |  |
| Control valve   | 2 Spool (Bucket, Boom)                     |  |
|                 | 3 Spool (Bucket, Boom, Aux)                |  |
|                 | Pilot pressure controled type              |  |
| System pressure | 280 kgf/cm² (3,982 psi)                    |  |

| Planetary reduction at wheel end |  |
|----------------------------------|--|
| Conventional                     |  |
| 24.666                           |  |
|                                  |  |

| Bucket<br>Controls | Туре                    | Pilot operated lift and tilt circuit, single-lever (joystick) control standard.  |
|--------------------|-------------------------|--|
|                    | Lift Circuit            | The valve has four functions ;<br>raise, hold, lower and float.<br>Can adjust automatic kickout from<br>horizontal to full lift. |
|                    | Tilt Circuit            | The valve has three functions ;<br>tilt back, hold and dump.<br>Can adjust automatic bucket<br>positioner to desired load angle. |
| Cylinder           |                         | Type : Double acting<br>No. of cylinders-bore x stroke;<br>Lift 2-140 mm (5.5") x 757 mm (29.8")                                 |
| ŀ                  | HL760-9A<br>HL760XTD-9A | Tilt 1-160 mm (6.2") x 530 mm (20.8")<br>Tilt 1-160 mm (6.2") x 515 mm (20.3")   |
| Cycle Time         |                         | Raise : 5.8 sec<br>Dump : 1.2 sec<br>Lower : 3.1 sec<br>Total : 10.1 sec   |

#### BRAKES

| Service Brakes  | Hydraulically actuated, wet disc       |
|-----------------|--|
|                 | brakes actuate all 4 wheels            |
|                 | independent axle-by-axle system.       |
|                 | Self adjusting & wheel speed brake.    |
| Parking Brake   | Spring-applied, hydraulically released |
|                 | disk brake                             |
| Emergency Brake | When brake oil pressure drops,         |
|                 | indicator light alerts operator and    |
|                 | parking brake automatically applies.   |

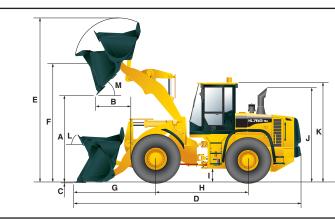
#### SERVICE REFILL CAPACITIES

| Fuel tank      | 327 liters (86.4 USgal) |
|----------------|-------------------------|
| Cooling system | 43 liters (11.3 USgal)  |
| Crankcase      | 18 liters (4.8 USgal)   |
| Transmission   | 32 liters (8.5 USgal)   |

#### OVERVIEW

|                       |           | -        |                 |                 |
|-----------------------|-----------|----------|-----------------|-----------------|
| Description           |           | UNIT     | HL760-9A        | HL760XTD-9A     |
| Operating weight      |           | kg (lb)  | 18,350 (40,450) | 19,150 (42,220) |
| Bucket capacity       | Heaped    | m³ (yd³) | 3.3 (4.3)       | 3.3 (4.3)       |
|                       | Struck    | m³ (yd³) | 2.8 (3.7)       | 2.8 (3.7)       |
| Breakout force-bucket |           | kg (lb)  | 16,230 (35,780) | 15,820 (34,880) |
| Tipping load          | Straight  | kg (lb)  | 14,300 (31,530) | 12,690 (27,980) |
|                       | Full turn | kg (lb)  | 12,410 (27,360) | 10,940 (24,120) |

#### DIMENSIONS



| Description                |                               |            | UNIT                                 | HL760-9A       | HL760XTD-9A     |  |
|----------------------------|-------------------------------|------------|--------------------------------------|----------------|-----------------|--|
|                            | Bucket Type                   |            | General purpose bolt-on cutting edge |                |                 |  |
| А.                         | . Dumping clearance at max.   |            | mm (ft-in)                           | 2,970 (9' 9")  | 3,460 (11' 4")  |  |
| height and 45° dump angle. |                               |            |                                      |                |                 |  |
| B.                         | Reach                         | Full lift  | mm (ft-in)                           | 1,220 (4')     | 1,235 (4′ 1″)   |  |
| D.                         |                               | 7ft height | mm (ft-in)                           | 1,790 (5' 10") | 2,195 (7' 2")   |  |
| C.                         | Digging depth                 |            | mm (in)                              | 90 (3.5")      | 86 (3.4")       |  |
| D                          | Overall length                | on ground  | mm (ft-in)                           | 8,100 (26' 7") | 8,660 (28' 5")  |  |
| D.                         |                               | at carry   | mm (ft-in)                           | 8,030 (26' 4") | 8,600 (28' 3")  |  |
| E.                         | Overall height (fully raised) |            | mm (ft-in)                           | 5,575 (18' 3") | 6,060 (19' 11") |  |
| F.                         | Bucket pivot max. height      |            | mm (ft-in)                           | 4,105 (13' 6") | 4,600 (15' 1")  |  |

### **STEERING SYSTEM**

| Туре                           | Load sensing hydrostatic articulated steering |  |  |  |  |
|--------------------------------|---|--|--|--|--|
| Pump                           | Piston pump, 126 liters/min<br>(33.3 gal/min) |  |  |  |  |
| Relief Valve Setting           | 250 kg/cm²(3,555 psi)                         |  |  |  |  |
| Cylinder Type<br>Bore x Stroke | Double acting<br>75mm (2.9") x 440mm (17.3")  |  |  |  |  |
| Steering Angle                 | 40° (each direction)                          |  |  |  |  |
| Features                       |   |  |  |  |  |

Features

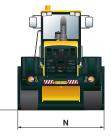
- Center-point frame articulation.

- Tilt and telescopic steering column.

| 35 liters (9.2 USgal)   |  |  |
|-------------------------|--|--|
| 35 liters (9.2 USgal)   |  |  |
| 178 liters (47 USgal)   |  |  |
| 252 liters (66.6 USgal) |  |  |
|                         |  |  |

#### TIRES

| Туре            | Tubeless, loader design tires |  |
|-----------------|-------------------------------|--|
| Standard        | 23.5-25, 20 PR, L3            |  |
| Options include | 20.5-25, 16 PR, L3            |  |
|                 | 23.5-25, 20 PR, L5            |  |
|                 | 23.5 R25 XHA*                 |  |



| Description          |                        | UNIT       | HL760-9A        | HL760XTD-9A     |
|----------------------|------------------------|------------|-----------------|-----------------|
| G. Front overhang    | G. Front overhang      |            | 2,780 (9' 1")   | 3,245 (10' 8")  |
| H. Wheelbase         |                        | mm (ft-in) | 3,300 (10' 10") | 3,300 (10' 10") |
| I. Ground clearance  |                        | mm (ft-in) | 420 (1' 5")     | 420 (1' 5")     |
| J. Height over ex    | J. Height over exhaust |            | 2,960 (9' 9")   | 2,960 (9' 9")   |
| K. Height over cal   | . Height over cab      |            | 3,450 (11' 4")  | 3,450 (11' 4")  |
|                      | on ground              | deg        | 42              | 42              |
| L. Roll-back angle   | at carry               | deg        | 47              | 49              |
| M. Dump angle        |                        | deg        | 47              | 47              |
| Clearance circle     |                        | mm (ft-in) | 13,130 (43' 1") | 13,560 (44' 6") |
| N. Our well suid the | with bucket            | mm (ft-in) | 2,900 (9' 6")   | 2,900 (9' 6")   |
| N. Overall width     | without bucket         | mm (ft-in) | 2,770 (9' 1")   | 2,770 (9' 1")   |