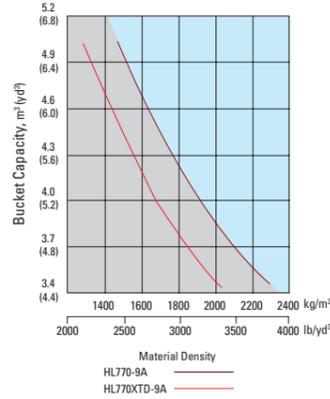


BUCKET SELECTION GUIDE



SUPPLEMENTAL SPECIFICATIONS

Description	Change in operating weight kg(lb)	Change in static tipping load-straight kg(lb)	Change in static tipping load-40° turn kg(lb)
23.5-25 20PR L3	-472 (-1041)	-350 (-770)	-310 (-680)
26.5-25 28PR L3	-4 (-9)	-3 (-7)	-2 (-4)
26.5-25 32PR L3	+164 (+362)	+120 (+265)	+110 (+240)
26.5 R25 XHA*	+108 (+238)	+80 (+175)	+70 (+155)

STANDARD EQUIPMENT

Electrical system Alternator, 70A Alarms, audible and visual - air filter clogging - transmission error - 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, 1000 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 - temperature(coolant, hydraulic oil, t/m oil) Lighting system - 1 LED dome lights - 2 stop and tail lights - 4 turn signals - brake lights(counterweight) - 2 head lights on front tower - 2 working lights on front roof - 2 working lights on grill Switches - clutch cut-off - hazard - Ignition key, start/stop switch - main light (illumination and head light) - parking - rear wiper & washer - work light - battery master switch - pilot cut-off Starter, electric Starting and charging system(24-volt) Cab Cab, ROPS/FOPS (sound suppressed and pressurized) with : - cigar lighter & ashtray - coat hook	Automatic climate control - air conditioner & heater - defroster - intermittent wiper and washer, front and rear Personal storage space - console box - holder, can and cup Rear view mirrors (2 inside) Rear view mirrors (2 outside) 2" retractable seat belt & adjustable suspension seat with armrests Steering column, tilt and telescopic Steering wheel with knob Roller type sunshade (front window) Tinted safety glass Two door cab Magazine pocket Pedals - one accelerator pedal - one brake pedal Radio/USB player(blueetooth) Rubber floor mat Wrist rest Engine Antifreeze Engine, Cummins QSL - Low Emission Diesel, Tier 4 interim	Engine enclosure, lockable Engine fuel priming pump(Electric) 3 operating mode (power / standard / econo) Fan guard Fuel/water separator Fuel warmer Under hood with exhaust stack DPF - 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 soft shift, auto-shift and kick-shift features included Transmission oil cooler Hydraulics 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, hydraulically-driven, temperature sensing type Others Articulation locking bar 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) 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 site level Vandalism protection caplocks Reversible cooling fan
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OPTIONAL EQUIPMENT

24-volt to 12-volt DC converter 3 Spool 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	High lift arrangement with additional counterweight, 520kg (1,146 lb) Hydraulic control, 2 lever Hydraulic control, 3 lever 3rd spool for auxiliary function Joystick with travel switch (FNR) Mud guard Operator suit Pallet forks 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* Tool kit 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
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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

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HEAVY INDUSTRIES CO.,LTD.
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HL770-9A

With Tier 4 Interim Engine installed

HYUNDAI HEAVY INDUSTRIES

MOVING YOU FURTHER



*Photo may include optional equipment.

HYUNDAI
HEAVY INDUSTRIES CO.,LTD.

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!

HL770-9A

Machine Walk-Around

Reliable Main Components

Engine Technology

Proven, reliable, fuel efficient, low emission, low noise Cummins Tier 4 Interim & EU Stage IIIB QSL9 engine
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 (Econo) 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 Clutch gap
Kick-down button & FNR switch for operating comfort

Axle

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

Improved Visibility

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
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 and overload prevention
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
RMS(Remote Management System) works through GPS/satellite technology to provide better customer service and support

Serviceability

Reversible, swing-out, cooling fan for easy service and improved cooler 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



*Photo may include optional equipment.

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



An enhanced axle improves driving over variable ground conditions. Self adjusting brakes that 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.

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 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, improves operator comfort and reduces 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

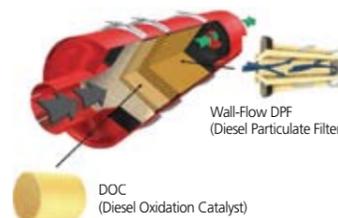
4 Mode Transmission Power Shift System
 M(Manual) Mode
 Auto L(Light) Mode : Light duty & long distance carry
 Auto N(Normal) Mode : General excavating & loading
 Auto H(Heavy) Mode : Heavy duty excavating & loading

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 QSL9 Engine



Built on a heritage of reliability and durability, Cummins QSL9 for Tier 4 Interim/Stage IIIB regulations takes a major step forward with the introduction of a High Pressure Common Rail(HPCR) fuel system. This heavy-duty system delivers a constant stream of pressurized fuel across all engine rpm speeds, providing cleaner combustion and improved engine response with multiple injections every combustion cycle. The fuel system is complemented by Cummins VGT Turbocharger, which continuously varies the airflow to precisely match engine rpm and load demands for optimal performance.



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 captures more than 90% reduction 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 dose not interrupt the daily machine operation. The operator can also initiate regeneration manually or disable regeneration on the working environment.



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 at low & high engine speed.

Fully Automatic Transmission



Fully automatic transmission designed for minimum 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 fault faults are recorded and accessible through the monitor.



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

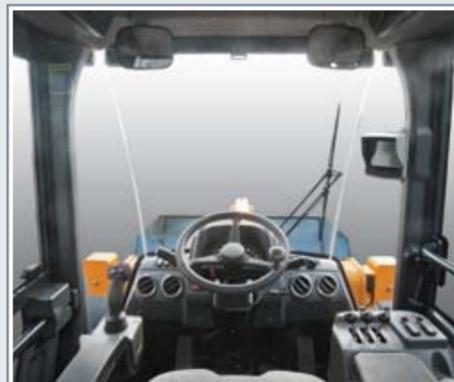
*Photo may include optional equipment.

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 equipment.

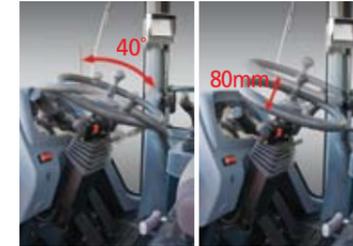


Wide and Convenient Cab

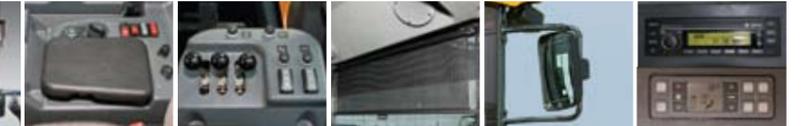
The newly designed cabin was conceived for more space, a wider field of view and operator comfort. The front windshield is rounded and 17% wider than our previous series. Special attention was given to a clean, open and convenient interior with wide of visibility on the machine surroundings and the job 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 of the front window and rear window allow the operator to reduce glare and improve visibility. Heated side mirrors feature built-in hot wires for quick defrosting in cold weather conditions.



Tilting / telescopic steering column



Wrist rest

FNR switch

Rear sunshade

Heated side mirrors

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

Reduced Stress

Hyundai's 9A series cabin offers lots of 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 with MP3 interface and USB input, plus remotely located controls is perfect for listening to music favorites.

Smart Key System (Option)



9A series excavators provide smart key system as an option. This allows the operator to start the engine by the push of a starter button without inserting a key in the ignition.

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, newly designed multimedia menu provides music & video player function for an enjoyable work.

Monitor Tilt Range



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.



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.

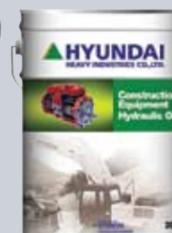


Full Fenders and Mud Guards (Option)

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



Hydraulic filter
(1,000 hr)



Hydraulic Oil
(5,000 hr)

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.

Specifications & Dimensions

ENGINE

Maker/Model	CUMMINS QSL9
Type	Watercooled, 4-cycle, turbocharged, charge aircooled direct injection, electronic controlled diesel engine
Gross power	300HP(224 kW) / 2,000rpm
Net power	297HP(221 kW) / 2,000rpm
Maximum torque	148kg.m(1,070 lb.ft) / 1,400rpm
No. of cylinders	6

※No derating for continuous operating required up to 1,829m (6,000ft). This engine meets the EPA(Tier 4 interim) / EU(Stage III-B) Emission regulation.

Bore x Stroke	114 mm (4.5") x 145 mm (5.7")
Displacement	8.9 l (543 cu in)
Compression ratio	17.8 : 1
Air cleaner	Direct flow, dry, two stage dual elements
Alternator	24V, 70 Amp
Battery	2 x 12V, 160 Ah.
Starting motor	24V, 7.8 kW

TRANSMISSION

Torque converter type	3-elements, single-stage single-phase
Tire	26.5-25, 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

		km/h (mph)	
Travel speed		4 speed (std)	5 speed with lock up clutch (Opt)
Forward	1st	7.0(4.3)	6.9(4.3)
	2nd	12.5(7.8)	12.6(7.8)
	3rd	27.6(17.1)	20.1(12.5)
	4th	42.0(26.1)	28.7(17.8)
	5th	N.A	46.0(28.6)
Reverse	1st	7.0(4.3)	6.9(4.3)
	2nd	12.5(7.8)	12.6(7.8)
	3rd	27.6(17.1)	28.7(17.8)

※Up/Down shift between F4 and F5 is always controlled automatically even if the manual mode is selected.

AXLES

Drive system	Four-wheel drive system
Mount	Rigid front axle and oscillating rear axle
Rear axle oscillation	± 12° (total 24°)

Hub reduction	Planetary reduction at wheel end
Differential	Conventional
Reduction ratio	23.334

HYDRAULIC SYSTEM

Type	Load sensing hydraulic system
Pump	Variable axial piston pump, 342 liters/min (90.3 gal/min)
Control valve	2 Spool (Bucket, Boom) 3 Spool (Bucket, Boom, Aux) Pilot pressure controlled type
System pressure	280 kgf/cm ² (3,982 psi)

Bucket Controls	Type	Pilot operated lift and tilt circuit, single-lever(joystick) control standard.
	Lift Circuit	The valve has four functions ; raise, hold, lower and float. Can adjust automatic kickout from horizontal to full lift.
	Tilt Circuit	The valve has three functions ; tilt back, hold and dump. Can adjust automatic bucket positioner to desired load angle.
Cylinder	Type : Double acting No. of cylinders-bore x stroke ; Lift 2-160 mm(6.2") x 765 mm(30.1") Tilt 1-180 mm(7.0") x 570 mm(22.4")	
Cycle Time		Raise : 5.4 sec Dump : 1.3 sec Lower : 2.8 sec Total : 9.5 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 disc brake in transmission
Emergency Brake	When brake oil pressure drops, indicator light alerts operator and parking brake automatically applies.

SERVICE REFILL CAPACITIES

Fuel tank	390 liters (103 USgal)
Cooling system	55 liters (14.5 USgal)
Crankcase	23 liters (6.1 USgal)
Transmission	43 liters (11.4 USgal)

OVERVIEW

Description	UNIT	HL770-9A	HL770XTD-9A
Operating weight	kg (lb)	23,500 (51,810)	24,250 (53,460)
Bucket capacity	Heaped	m ³ (yd ³) 4.2 (5.5)	4.2 (5.5)
	Struck	m ³ (yd ³) 3.6 (4.7)	3.6 (4.7)
Breakout force-bucket	kg (lb)	21,740 (47,930)	21,390 (47,160)
Tipping load	Straight	kg (lb) 17,730 (39,090)	16,120 (35,540)
	Full turn	kg (lb) 15,350 (33,840)	13,860 (30,560)

STEERING SYSTEM

Type	Load sensing hydrostatic articulated steering
Pump	Piston pump, 220 liters/min (58.1 gal/min)
Relief Valve Setting	210 kg/cm ² (2,990 psi)
Cylinder	Type Double acting Bore x Stroke 95mm(3.7") x 480mm(18.9")
Steering Angle	40°(each direction)

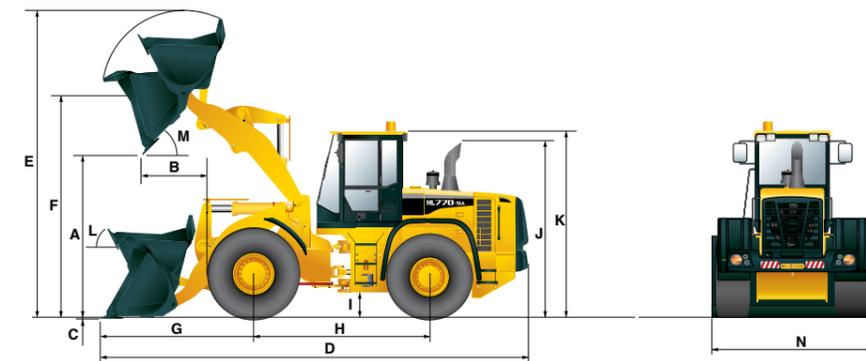
Features
- Center-point frame articulation.
- Tilt and telescopic steering column.

Front axle	51 liters (13.5 USgal)
Rear axle	40 liters (10.6 USgal)
Hydraulic tank	200 liters (52.8 USgal)
Hydraulic system (including tank)	292 liters (77.1 USgal)

TIRES

Type	Tubeless, loader design tires
Standard	26.5-25, 20 PR, L3
Options include	26.5 R25 XHA* 26.5-25, 28 PR, L3 26.5-25, 32 PR, L3 23.5-25, 20 PR, L3 26.5-25, 20 PR, L5

DIMENSIONS



Description	UNIT	HL770-9A	HL770XTD-9A
Bucket Type		General purpose bolt-on cutting edge	
A. Dumping clearance at max. height and 45° dump angle.	mm (ft-in)	3,090 (10' 2")	3,540 (11' 7")
B. Reach	Full lift	mm (ft-in) 1,295 (9' 9")	1,295 (9' 9")
	7ft height	mm (ft-in) 1,920 (6' 4")	2,275 (7' 6")
C. Digging depth	mm (in)	100 (3.9")	130 (5.1")
D. Overall length	on ground	mm (ft-in) 8,700 (28' 7")	9,175 (30' 1")
	at carry	mm (ft-in) 8,590 (28' 2")	9,075 (29' 9")
E. Overall height (fully raised)	mm (ft-in)	5,890 (19' 4")	6,340 (20' 10")
F. Bucket pivot max. height	mm (ft-in)	4,310 (14' 2")	4,760 (15' 7")

Description	UNIT	HL770-9A	HL770XTD-9A
G. Front overhang	mm (ft-in)	2,990 (9' 10")	3,400 (11' 2")
H. Wheelbase	mm (ft-in)	3,500 (11' 6")	3,500 (11' 6")
I. Ground clearance	mm (ft-in)	480 (1' 7")	480 (1' 7")
J. Height over exhaust	mm (ft-in)	3,150 (10' 4")	3,150 (10' 4")
K. Height over cab	mm (ft-in)	3,560 (11' 8")	3,560 (11' 8")
L. Roll-back angle (on ground/at carry)	deg	44 / 49	44 / 50
M. Dump angle	deg	48	48
Clearance circle	mm (ft-in)	13,990 (45' 11")	14,360 (47' 1")
N. Overall width	with bucket	mm (ft-in) 3,100 (10' 2")	3,100 (10' 2")
	without bucket	mm (ft-in) 2,975 (9' 9")	2,975 (9' 9")