



Building a better future  
**Global Leader**

## ***NEW 7A SERIES***

HYUNDAI WHEEL LOADER Applied Tier III Engine

# **HL780-7A**

**We build a better future**



 **HYUNDAI**  
HEAVY INDUSTRIES CO., LTD.

■ Photo may include optional equipment.

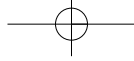
# Hardworking Hyundai Loaders



**Meet the new generation wheel loader with Hyundai.**

**The HL780-7A will give you the satisfaction in higher power, lower fuel consumption, more comfort and lower emission compared to the past.**

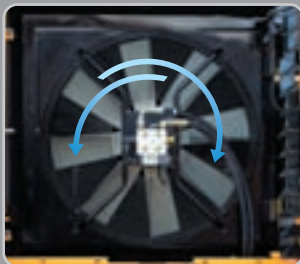
**Come and experience what Hyundai has created for you by bringing power and up to date technology.**



■ Photo may include optional equipment.



## HL780-7A *Additional Option*



### Reversible Fan

A reversible fan is optionally installed to clean the radiator and hydraulic oil cooler from dust and foreign objects.



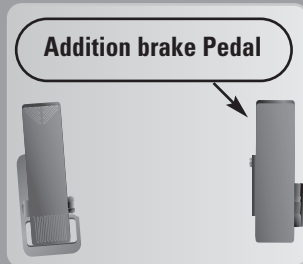
### Rear View Mirror

To enhance rear sight during misty or winter conditions, electrical heated L/R rear view mirrors are available.

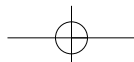


### FNR Switch on Joystick Control Lever

An incorporated forward/reverse travel switch is installed in the joy-stick to improve operators comfort.



### Dual Service Brake Pedals





*New Generation, Innovative Solution in Earth Moving, the* **HL780-7A**

**A Centralized Display & Switch Panel**

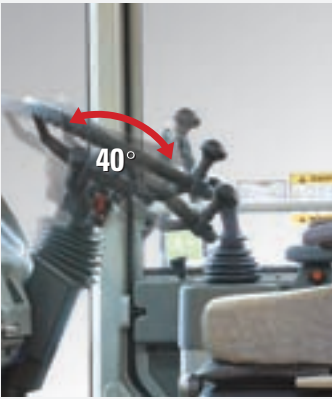
The centralized digital display informs the status and conditions of your machine at a glance. Easy-to-read gauges on the instrument panel in front provide constant and accurate information.



# Control Center

The all-new, deluxe operating space was engineered with 3-D modelling to optimize your ultimate control centre. The wide, tinted and laminated front windshield has no framing cutting through to ensure excellent visibility.

## Adjustable steering column



40°



80 mm

## Full automatic shift lever



## FNR Switch on Joystick Control Lever

A forward/neutral/reverse travel switch can be installed on top of it for operators convenience.



## Joystick Controls

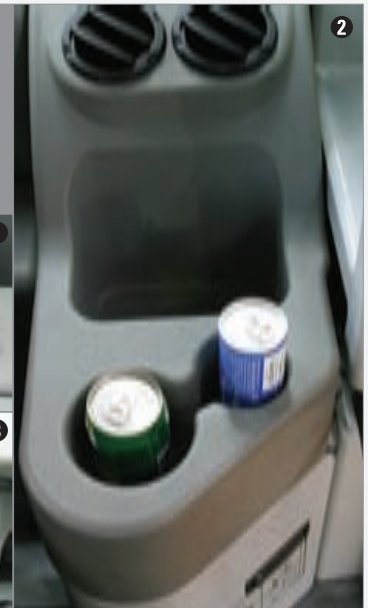
Boom and bucket are operated by a pilot-pressure controlled joystick. (Option)

## The Air Conditioning and Heating System

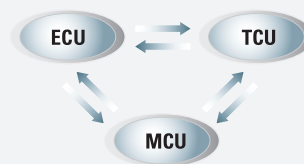


The operator can easily control the temperature and air flow. The defroster on the front windshield and rear window makes it convenient for winter working usage.

- 1 Power Outlet & Cigar Jack
- 2 Cup Holder & Console Box
- 3 Magazine Box



## Up-to-Date-technology CAN System



Engine control Unit(ECU), Transmission control Unit(TCU) and Machine control Unit(MCU) realize the optimal performance through the mutual CAN communications.

## Ride control system

A ride control system is available for smooth travelling during load and carry operation. It significantly reduces machine bouncing and absorbs shocks while travelling so enhancing productivity. This system reduces operator's fatigue as well as stress on the structure and components of the machine.



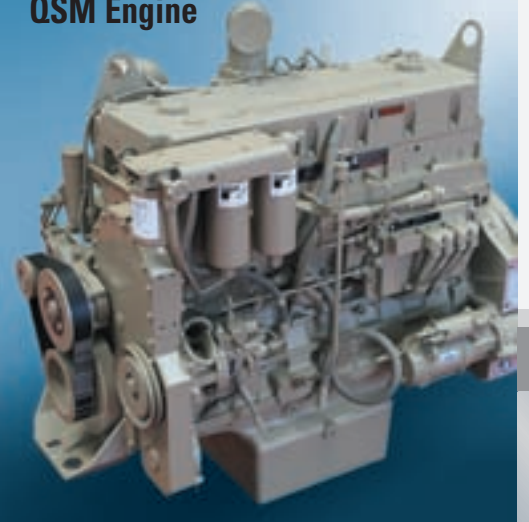
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**CUMMINS**  
QSM Engine



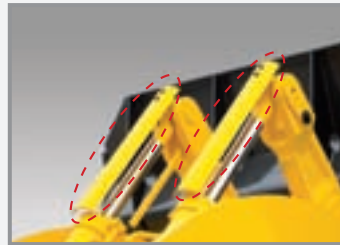
The CUMMINS QSM11 electronic control engine combines full authority electronic controls with a reliable performance. The combination of improved airflow and evenly dispersed fuel results in increased power, improved transient response and reduced fuel consumption. The QSM11 is using advanced electronic controls to meet the emission standards (EPA Tier III, EU Stage III-A)

# A Well Rounded System

Maximize the productivity of your business with the HL780-7A. With our vast experience in the production of construction equipment, Hyundai is able to meet the demand of our customers.



**Left and right access door**



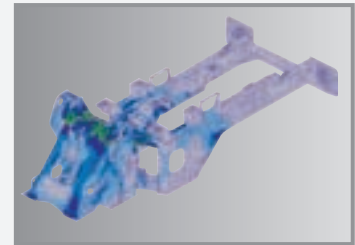
**Bucket cylinder guard**

This guard helps to prevent possible damage while loading material.



**Wear plate**

This close up shows the protective plating found underneath the rear of the bucket and is used to prevent excess wear when digging into material.



**High-rigidity frames**

Front and rear frames are designed for work in the toughest applications and provide high rigidity for the power train and loader equipment. The sturdy frames, together with the reinforced front/rear frame linkage, resist loading stress and shock within operation.



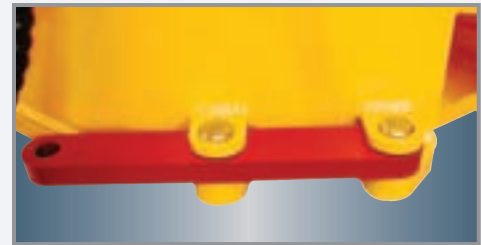
**Master switch**

A master switch disconnects the battery power to protect the electrical system from excessive electrical drainage.



**Sealed loader linkage**

Fully protected fitting including dust seals and o-rings on the bucket linkage will extend lubrication intervals remarkably.



**Frame lock**

Machine can be locked by a locking bar to prevent movement during transportation.

## Multi Function Transmission



The newly developed electronic controller represents the beating heart of the transmission. The hydraulically operated gear shifting with proportional valves allows precise clutch operation. For each gear change, the control unit performs a monitoring function to ensure that the specified shift curve is adhered to, and readjusts the shift pressure applied to the clutches accordingly. This result in smooth gearshifts under load without traction interrupts. It also prevents standstills, sudden load changes or torque peaks during operations such as steep hill driving with full load. In addition, there is the option for the driver to make manual gearshifts.

# Accessible and Serviceable

New Generation, Innovative Solution in Earth Moving, the **HL780-7A**



### Accessible grease fittings

Grease fittings are highlighted and available around the machine for fast access when doing your service checks.



### Simple air filter replacements

The air cleaner is easily replaceable by turning the wing nut on the outer shell, counter-clockwise.



### Open pin access

You can quicker remove or tighten your front attachment pin (chromated) with this open connector system.



### Remote type drain port

It is now easier to change your engine oil, coolant and hydraulic oil with the remote drain port located near the rear axle of the machine.



Photo may include optional equipment.

An ideal arrangement of components ensures quick and convenience maintenance. Highly accessible engine compartment assures fast and efficient repairs when necessary.



**Hydraulic tank**

The hydraulic tank is located behind the cab to facilitate accessibility to hydraulic hoses and pipes.



**Oil sight gauge**

A sight gauge is installed on the side of the hydraulic tank for convenient ground level check out.



**Transmission oil port**

The transmission oil change port is openly accessible. It comes with an anti-vandalism lock for machine protection.



**Central electric controllers & Fuse Box**

Electric controllers and a concentrated fuse box are centralized to improve serviceability.



**Cabin Air Fresh Filter**

The internal pressure is maintained slightly higher than the outside to exclude dust from entering in and reduce noise levels to the cabin.



**Coolant Sight Gauge**

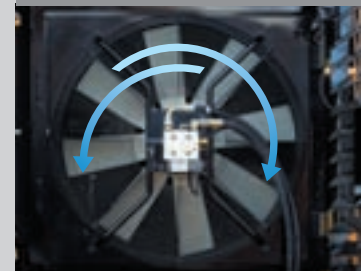
A coolant sight gauge is installed on the top of the radiator for convenient checks of coolant level.

**Easy Access to All Engine Components**

Here you find the engine oil check, main and pre-filters (fuel, oil, coolant). The large engine-side-panels permit easy and safe access for inspections. The filters can be screwed on and off for quick replacements.



**Up-to-date hydraulic remote cooling fan**



Minimum fuel consumption and low noise is realized by using a hydraulic cooling fan sensing coolant-, air intake-, transmission oil- and hydraulic oil temperature. Reversible cooling fan is installed.

## Specification

### Engine

<b>Maker/Model</b>	CUMMINS QSM11	<b>Bore x Stroke</b>	125 mm (4.9") x 147 mm (5.8")
<b>Type</b>	4-cycle, turbocharged, charge air-cooled direct injection, electronic controlled diesel engine	<b>Displacement</b>	11 liter (660 cu in)
<b>Gross power</b>	250 kW (335 HP) / 2,000 rpm	<b>Compression ratio</b>	16.3 : 1
<b>Net power</b>	239 kW (320 HP) / 2,000 rpm	<b>Air cleaner</b>	Dry, dual elements
<b>Maximum power</b>	272 kW (365 HP) / 1,800 rpm	<b>Alternator</b>	24V, 70 Amp
<b>Maximum torque</b>	1,710 Nm (1,235 lbf.ft) / 1,400 rpm	<b>Battery</b>	2 x 12V, 160 Ah.
<b>No. of cylinders</b>	6	<b>Starting motor</b>	24V, 7.5 kW

\* Net power output of standard engine as installed in this vehicle (per SAE J1349) complete with fan, air cleaner, alternator, water pump, lubricating oil pump and fuel pump. No derating for continuous operating required up to 2,438 m (8,000 ft). This engine meets the EPA(Tier III-A) / EU(Stage III-A) Emission regulation.

### Transmission

<b>Torque converter type</b>	3-elements, single-stage single-phase	<b>Travel speed</b>	km/h (mph)
<b>Stall torque ratio</b>	2.987 :1	<b>Forward</b>	
		1st	6.2 (3.9)
		2nd	11.5 (7.1)
		3rd	17.6 (10.9)
		4th	34.4 (21.4)
		<b>Reverse</b>	
		1st	6.2 (3.9)
		2nd	11.5 (7.1)
		3rd	23.8 (14.8)

\* 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.

### Axles

<b>Drive system</b>	Four-wheel drive system	<b>Hub reduction</b>	Planetary reduction at wheel end
<b>Mount</b>	Rigid front axle and oscillating rear axle	<b>Differential</b>	Limited slip differential
<b>Rear axle oscillation</b>	+/-13° (total 26°)	<b>Reduction ratio</b>	27.0
		<b>Axle oil cooling</b>	External oil cooling

### Hydraulic System

<b>Type</b>	Open-centered, tandem circuit system. Pilot-operated controls. Closed system with pressure and vacuum relief.	<b>Bucket Controls</b>	
<b>Pump</b>	Vane type, 482 liters/min (127 gal/min) @ governed rpm	Type	Pilot operated lift and tilt circuit, single-lever (joystick) control standard.
<b>Control Valve</b>	Two function valve with single or two lever control: Optional third-function valve with auxiliary lever.	Lift Circuit	The valve has four functions: raise, hold, lower and float. Can adjust automatic kick-out from horizontal to full lift.
Relief Valve Setting	20,5 MPa (2990 psi)	Tilt Circuit	The valve has three functions: tilt back, hold and dump. Can adjust automatic bucket positioning to a desired load angle.
<b>Pilot System</b>		<b>Cylinder</b>	Type : Double acting Lift, bore x stroke 200 mm (7.9") x 863 mm (34.0") Tilt, bore x stroke 160 mm (6.3") x 580 mm (22.8")
Type	Pilot oil pressure is generated by the pilot oil supply unit.	<b>Cycle Time</b>	Raise : 6.4 sec (with load) Dump : 1.4 sec Lower : 3.0 sec (empty) Total : 10.8 sec
Relief Valve Setting	2,9 MPa (427 psi)		

## Specification

### Brakes

<b>Service Brakes</b>	Hydraulically actuated, wet disc brakes actuate all 4 wheels independent axle-by-axle system. Single pedal braking including clutch cut off Dual pedals option.
<b>Parking Brake</b>	Spring-applied, hydraulically released disc brake on front axle input shaft.
<b>Emergency Brake</b>	When brake oil pressure drops, indicator light alerts operator and parking brake automatically applies.

### Steering System

<b>Type</b>	Full hydraulic power steering
<b>Pump</b>	Vane type, 270 liters/min (65.5 gal/min)
<b>Relief Valve Setting</b>	20,5 MPa (2990 psi)
<b>Cylinder</b>	Type Bore x Stroke
	Double acting 100 mm (3.9") x 480 mm (18.9")
<b>Steering Angle</b>	40°(each direction)

**Features**

- Centre-point frame articulation
- Flow-amplified, load-sensing, pressure-compensated system
- Steering-wheel operated metering pump controls flow to steering cylinders
- Tilt and telescopic steering column

### Service Refill Capacities

<b>Fuel tank</b>	470 litres (124.2 USgal)
<b>Cooling system</b>	65 litres (17.2 USgal)
<b>Crankcase</b>	38 litres (10.0 USgal)
<b>Transmission</b>	43 litres (11.4 USgal)

<b>Front axle</b>	60 litres (15.9 USgal)
<b>Rear axle</b>	60 litres (15.9 USgal)
<b>Hydraulic tank</b>	210 litres (55.4 USgal)
<b>Hydraulic system (including tank)</b>	360 litres (90.0 USgal)

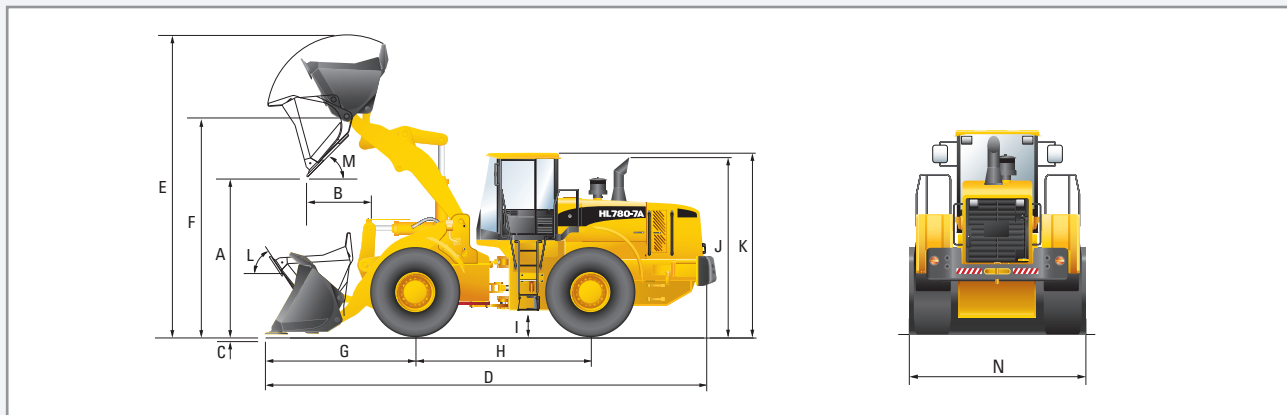
### Overview

Description	UNIT	HL780-7A	HL780XTD-7A
Operating weight	kg (lb)	29,300 (64,600)	30,000 (66,100)
Bucket capacity	Heaped	m <sup>3</sup> (yd <sup>3</sup> )	5.1 (6.7)
	Struck	m <sup>3</sup> (yd <sup>3</sup> )	4.3 (5.6)
Breakout force-bucket	kg (lb)	24,820 (54,720)	23,880 (52,650)
Tipping load	Straight	kg (lb)	24,130 (53,200)
	Full turn	kg (lb)	20,800 (45,850)

### Tires

<b>Type</b>	Tubeless, loader design tires
<b>Standard</b>	29.5-25, 22 PR, L3
<b>Options include</b>	26.5-25, 32 PR, L3 29.5-25, 28 PR, L3 29.5-25, 28 PR, L5 29.5 R25 XHA*

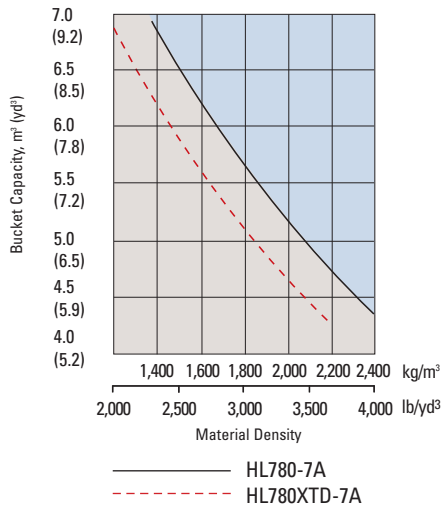
## Dimensions



Description	UNIT	HL780-7A	HL780XTD-7A
Bucket Type	General purpose bolt-on cutting edge		
A. Dumping clearance at max. height and 45° dump angle.	mm (ft-in)	3,300 (10' 10")	3,720 (12' 2")
B. Reach	Full lift	mm (ft-in)	1,365 (4' 6")
	7ft height	mm (ft-in)	2,070 (6' 9")
C. Digging depth	mm (in)	95 (3.7")	110 (4.3")
D. Overall length	on ground	mm (ft-in)	9,440 (32")
	at carry	mm (ft-in)	9,340 (30' 8")
E. Overall height (fully raised)	mm (ft-in)	6,160 (20' 3")	6,590 (21' 7")
F. Bucket pivot max. height	mm (ft-in)	4,510 (14' 10")	4,930 (16' 2")

Description	UNIT	HL780-7A	HL780XTD-7A
G. Front overhang	mm (ft-in)	3,080 (10' 1")	3,510 (11' 6")
H. Wheelbase	mm (ft-in)	3,700 (12' 2")	3,700 (12' 2")
I. Ground clearance	mm (ft-in)	475 (1' 7")	475 (1' 7")
J. Height over exhaust	mm (ft-in)	3,720 (12' 2")	3,720 (12' 2")
K. Height over cab	mm (ft-in)	3,805 (12' 6")	3,805 (12' 6")
L. Roll-back angle on ground / at carry	deg	42 / 48	42 / 49
M. Dump angle	deg	47	47
Clearance circle	mm (ft-in)	15,170 (49' 9")	15,580 (51' 1")
N. Overall width	with bucket	mm (ft-in)	3,450 (11' 4")
	without bucket	mm (ft-in)	3,220 (10' 7")

### 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)
<b>26.5-25 32PR L3</b>	-112 (-247)	-90 (-198)	-80 (-176)
<b>29.5-25 28PR L3</b>	+352 (+776)	+280 (+617)	+240 (+529)
<b>29.5-25 28PR L5</b>	+1240 (+2,734)	+980 (+2,160)	+860 (+1,896)
<b>29.5 R25 XHA*</b>	+500 (+1,102)	+400 (+882)	+350 (+772)

### Standard Equipment

- Adjustable steering column
- Air conditioner with heater & defroster
- Air cleaner, double-element type (dry type with dust valve)
- Alarm, back-up
- Alternator, 70A
- Anti-freeze
- Automatic boom kick-out
- Automatic bucket positioner
- Battery: 1000 CCA, 12V (2)
- Boom lock safety valve
- Brake system, includes
  - Service, enclosed wet-disc
  - Parking, disc type on front axle
- Counterweight
- Cab ROPS/FOPS (Sound suppressed and pressurized) with:
  - Cup holder
  - Lighter & ashtray
- Drawbar, fixed
- Electrical system
- Alarms, audible and visual
  - Air filter clogging
  - Engine water temperature
  - Hydraulic oil temperature
  - Low alternator voltage
  - Low brake oil pressure
  - Low transmission oil pressure
  - Parking brake
- Gauges
  - Engine water temperature
  - Fuel level
  - Speedometer
  - Voltmeter
  - T/M oil temp gauge
- Indicator lights
  - High beam
  - Turn signals
- Lights
  - Two cabin lights
  - Two head lights
  - Two rear lights
- Two stop, and tail lights
- Four turn signal
- Switches
  - Clutch cut-off
  - Emergency travel
  - Hazard
  - Head light
  - Illumination
  - Parking
  - Rear washer
  - Rear wiper
  - Work light
- Fan, blower
- Fan guard
- Fenders, front and rear
- Frame lock
- Horn, electric
- Intermittent wiper and washers
- Intake air heater
- Sun visor
- Ladders, left and right
- License plate light
- Master switch
- Muffler
- Radiator
- Radio CD player
- Ride control system
- Hydraulic oil cooler
- Transmission oil cooler
- External axle oil cooler
- Emergency steering system
- Reversible Cooling Fan System
- Joystick with forward/reverse travel switch
- Seat
  - Adjustable deluxe suspension
  - Cloth seat with armrests
  - Seat belt
- Wrist rest
- Steering knob
- Differential
  - Front axle (limited slip)
  - Rear axle (limited slip)
- Tires (29.5-25, 22PR L3)
- Rear view mirrors, heated
- Guard
  - Crankcase
  - Transmission
  - Rear view mirrors (2 out side)
  - Rear view mirrors (2 in side)

### Optional Equipment

- Rotation beacon
- Fuel warmer
- Fire extinguisher
- Cutting edge, bolt-on type
- Seat
  - 2" static seat belt & adjustable mechanical suspension (vinyl)
  - 3" retractable seat belt & adjustable mechanical suspension
- 3" retractable seat belt & adjustable air suspension
- Sliding door window
- Tooth, 2 pieces, bolt on type
- 2 spool, single lever, pilot control for boom and bucket actuation
- Tires
  - 29.5-25, 28 PR L3
  - 29.5-25, 28 PR L5
  - 29.5-25, 32 PR L3
- Tool kit
- Valve, 3-spool
- Two lever operation of boom & bucket
- High lift arrangement with additional counter weight, 564kg (1,240b)

Standard and optional equipment may vary. Contact your Hyundai dealer for more information. The machine shown may vary according to International standards. All US measurement rounded off to nearest pounds or inches.



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