



**FLORIDA SHERIFFS ASSOCIATION BID FSA20-VEH18.0
ITEM #193 WHEEL LOADER 5.75 CUBIC YARD**

Base Hitachi ZW310 Wheel Loader
73PA022 5.5 Cu. Yd. Bucket with Bolt-on Edge
TRA2641 26.5R25 L-3 Radial Tires
73PD020 26.5 3-Piece Rims

STANDARD EQUIPMENT

ENGINE	HYDRAULIC SYSTEM	ALARMS, GAUGES, INDICATORS	CAB
Air cleaner, double element Auto idle shut down Cold start (intake air heater) Cooling fan, automatic reversible Cummins QSL9 diesel engine EGR System Engine block heater 120V Fuel filter (Main) Fuel pre-filter, w/water separator Rain cap SCR catalyst and DOC VGT (variable geometry turbocharger) Work mode selector	Boom kick-out, dual (operator adjustable in cab) Bucket positioner (horizontal) Control lever, dual, pilot-assisted Control lever lock (electric) Control valve, 2-fuction, parallel and tandem control Pump, variable displacement, load-sensing Ride control w/load sensing valve and automatic shut-off Steering, pilot System; open-center, high-pressure, load-sensing Valve, anti-drift	Alarms (Visual & Audible) Aftertreatment device (SCR) Air cleaner element Axle oil temperature Battery discharge warning Boost temperature rise Brake oil low pressure CAN network system DEF/AdBlue tank level/ quality/system Engine oil low pressure Engine trouble Engine warning Fuel filter (water in fuel) Hydraulic oil level Hydraulic oil temperature Main pump oil pressure Overheat (Engine Coolant) Transmission oil temperature Transmission warning Gauges DEF/AdBlue tank level Engine coolant temperature Fuel gauge Speedometer Tachometer Transmission oil temperature Indicators Aftertreatment device Air conditioner display Boom kick-out, dual Cold start Control lever lock Declutch ECO-Operating Status Fan reverse rotation F-N-R Selection F-N-R Switch enable High beam Parking brake Shift hold Time/Operating hour/ODO Transmission mode and status Turn signal w/4-way flashers/Marker Work mode (Normal, Power)	ROPS Cab: Enclosed cab with sound suppression, front & rear wipers and washers, two rear view and side mirrors, tinted glass, full view latch-back doors, and sliding side windows. Accessory outlet, 12v Adjustable armrest/console AC/Heater/Pressurizer AM/FM/WB radio with AUX input Ashtray Cab dome lamps (2) Cigarette lighter, 24V Coat hook Cup holder (2) Floormat, sweep-out Retractable seat belt (3-inch) ROPS/FOPS certified Seat, Premium, Heated w/TLV suspension Steering column, telescoping and tilting w/quick-release pedal Steering wheel Storage box (heated/cooled) Storage tray Sun visor
POWERTRAIN	ELECTRICAL		OTHERS
Brakes, service Enclosed wet disc Dual system Inboard mounted Brake, parking Spring applied Oil pressure released Wet disc type Differential, torque proportioning type (F/R) Down-shift switch Drive shafts, low maintenance F-R direction selector (2-column mounted/ console mounted) Lock-up torque converter Quick Power switch Transmission, automatic w/load sensing system Transmission declutch (3-position L/H/Off) Transmission mode selection (3-position AUTO1/MAN/AUTO2) Universal joints, sealed	24-volt electrical system Back-up alarm Batteries (2), 12V, 1,000 CCA Battery disconnect switch Camera, rear-view Converter, 12V/15 Amp Horn, dual electric Instrument panel, LCD, color Lights: 2 Headlights (halogen) 2 Forward working lights (hal.) 4 Rear working lights (hal.) 2 Stop/tail/backup (LED) Turn signal w/4-way flashers/marker		Articulation locking bar Counterweight Drawbar Fenders, front, w/mudflap Fenders, rear, full, w/mudflap Global e-service, telematic monitoring system Ladders, inclined Lifting eyes Linkage pins, HN bushing Neutral safety start Rear grill, hinged Steps, rear Vandalism protection Z-bar loader linkage

Engine: CUMMINS QSL9 Diesel

Horsepower: 302 HP/1600 RPM (225kW/1600 RPM) Net

Machine Price Includes Standard Tires and Rims: Radial, 26.5 R25 L3

Effective December 6, 2019

(Revised May 7, 2020)

(Subject to change without notice)

HCM ZW310-6 PRICE LIST

BUCKETS

General Purpose, 5.5 Cu. Yd. w/ Bolt-on Cutting Edge	73PA022
General Purpose, 5.5 Cu. Yd. w/ Teeth & Segments	73PA082
Material Handling, 6.1 Cu. Yd. w/ Bolt-on Cutting Edge	73PA042

QUICK COUPLER AND ATTACHMENTS

Hydraulic Quick Coupler, 420 Type, w/ Lines & Control	73PB010
72" Construction Utility Fork on 106" Carriage, QC Type (+)	73PB020
General Purpose, 4.9 Cu. Yd. Bucket w/ Bolt-on Cutting Edge, QC Type	73PA060

RIMS

23.5-25 3-PIECE RIM W/ LOCK (EW815)	73PD010
26.5-25 3-PIECE RIM W/ LOCK (EW601) - STD Price Reference Only	73PD020

TIRE SELECTION (Subject to Availability) (Rims must be selected)

Radial, 26.5 R25 L3 (Brand not Specified) - STD Price Reference Only	TRA2641
Radial, 26.5 R25 L3 2* MICHELIN XHA2	TMI2601

TIRE INSTALL OPTIONS (Subject to Tire Condition)

DEALER SUPPLIED TIRES PRE-MOUNTED ON RIMS (PNEUMATIC / SOLID)	73PD070
DEALER SUPPLIED TIRES TO BE MOUNTED ON FACTORY RIMS (OPTION 73PD010, 73PD020)	73PD060

CAB ACCESSORIES

E-STICK STEERING	73P4075
FIRE EXTINGUISHER, 5 LB, 2A:10B:C RATED (w/ mounting)	73P6110
HEATED MIRRORS	73P6120
LIGHTS, LED (mounted on cab), Front & Rear	73P5120
MONITOR, BACKUP CAMERA, Heavy-Duty, 7" High-Mount RLED Monitor w/Sunshade	73P6135
REAR PROXIMITY DETECTION (Must Select MONITOR, BACKUP CAMERA, Heavy-Duty option (73P6135))	73P6180
SECONDARY STEERING	73P4050
SINGLE LEVER HYDRAULIC CONTROL (w/ Multi-Function Grip)	73P4040
SINGLE LEVER HYDRAULIC CONTROL (w/ Multi-Function Grip) (Field Installed)	73P4040F
<input type="checkbox"/> A <input type="checkbox"/> C <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> R <input type="checkbox"/> W CAB PRE-FILTER (SY-KLONE © RESPA-CF2)	73P6041

ELECTRICAL SYSTEM

<input type="checkbox"/> C <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> ANTI-CORROSIVE WIRING HARNESS	73P5090
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Recommended for Special Application :

☐A☐C☐H☐L☐R☐W = (A) Agriculture, (C) Chemical, (H) Hot Slag, (L) Logging, (R) Refuse, (W) Woodchip

(*) Long lead time, may increase delivery time.

(+) May ship separately from machine. Dealer responsible for freight.

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HYDRAULICS

3rd FUNCTION HYDRAULICS, CONTROL LEVER, LINES AND CUSHION DUMP VALVE (for use w/ Standard Lift Arm, Dual Control Lever)	73P4024
3rd FUNCTION HYDRAULICS, CONTROL LEVER, LINES AND CUSHION DUMP VALVE (Field Installed) (for use w/ Standard Lift Arm, Dual Control Lever)	73P4024F
3rd FUNCTION HYDRAULICS, CONTROL LEVER, LINES AND CUSHION DUMP VALVE (for use w/ Standard Lift Arm, Single Control Lever) (OPTION 73P4040)	73P4025
3rd FUNCTION HYDRAULICS, CONTROL LEVER, LINES AND CUSHION DUMP VALVE (for use w/ High Lift Arm, Dual Lever)	73P4026
3rd FUNCTION HYDRAULICS, CONTROL LEVER, LINES AND CUSHION DUMP VALVE (for use w/ High Lift Arm, Single Lever) (OPTION 73P4040)	73P4027
CUSHION DUMP VALVE (use with heavy/over-size buckets and attachments)	73P4030
CUSHION DUMP VALVE (use with heavy/over-size buckets and attachments) (Field Installed)	73P4030F

MAINTENANCE / SERVICEABILITY

AUTO-LUBE SYSTEM	73P1180
GLOBAL E-SERVICE, Telematic Monitoring System (SAT version) (I.L.O. STD GSM version)	73P5020

POWERTRAIN

AXLE OIL COOLER					73P3085		
SPEED LIMIT PROGRAM - 12MPH (20KPH) (Mandatory for solid tires)					73P3045		
C					AXLE BRAKE LINES, STAINLESS STEEL	73P4150	
A				R	W	COOLING SYSTEM CORES, WIDE FIN SPACING	73P2030
A					W	ENGINE PRE-CLEANER (Turbine Style)	73P2020

PROTECTION / GUARDING

BELLYGUARD, TRANSMISSION					73P1030	
			R	W	ARTICULATION AREA GUARD - Flexible Rubber Belting (*)	73P1081
			L		ARTICULATION AREA GUARD - Steel Type (*)	73P1080
			R		BELLYGUARD, FRONT CHASSIS (*)	73P1040
			R		BUMPER GUARD - Refuse (for use w/ non-pneumatic-tires)	73P1025
			L		CAB WINDSHIELD GUARD - Logging (*)	73P6030
			R		CAB WINDSHIELD GUARD - Refuse (*)	73P6035
			L	R	HYDRAULIC TANK SIGHT GAUGE GUARD	73P1120
			R		LIGHT GUARD, HEADLIGHT	73P5050
			R		LIGHT GUARD, TAIL LIGHT	73P5060
A			R	W	RADIATOR AREA SCREEN GUARD (*)	73P2040
			R		WHEEL SEAL GUARDS (*)	73P3021

STRUCTURAL ACCESSORIES

HIGH LIFT ARM FOR MATERIAL HANDLING (*)					73P1050
LOADRITE SCALE (Scale Installation & Training on Customer Jobsite)					73P1275
			R	STEPS, STEEL CABLE (*)	73P1130

Recommended for Special Application :

A	C	H	L	R	W
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 = (A) Agriculture, (C) Chemical, (H) Hot Slag, (L) Logging, (R) Refuse, (W) Woodchip

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ZW-6 series

HITACHI

Reliable solutions

ZW310



WHEEL LOADER

Model: ZW310-6

Gross engine rated power: 285 hp/212 kW (ISO14396)

Operating weight: 53,310–54,390 lb (24,180–24,670 kg)

Bucket ISO heaped: 5.5–6.1 yd³ (4.2–4.7 m³)

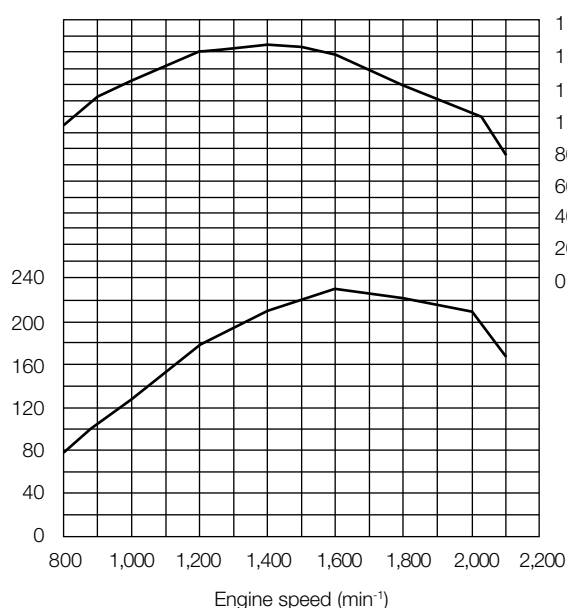
SPECIFICATIONS

ENGINE

Model	CUMMINS QSL9
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharger and intercooled
Aftertreatment	DOC and SCR system
No. of cylinders	6
Maximum power	
ISO 14396.....	310 hp (231 kW) at 1,600 min ⁻¹ (rpm)
ISO 9249, net	302 hp (225 kW) at 1,600 min ⁻¹ (rpm)
Maximum torque, gross ...	1 451 Nm at 1 400 min ⁻¹ (rpm)
Bore and stroke	4.49 in X 5.69 in (114 mm X 145 mm)
Piston displacement	543 in ³ (8.9 L)
Batteries	2 x 12 V
Air cleaner	Two element dry type with restriction indicator
Emission	Complies with EU stage IV and US EPA Tier 4 Final

Engine output
(kW)

Engine torque
(Nm)



POWERTRAIN

Transmission	Torque converter, countershaft type powershift with computer-controlled automatic shift and manual shift features included
Torque converter	Three element, single stage, single phase with lock-up clutch
Main clutch	Wet hydraulic, multi-disc type
Cooling method	Forced circulation type
Travel speed* Forward/Reverse	
1st	6.6 [6.9]/6.6 [6.9] km/mph
2nd	11.3 (11.3) [11.8 (11.8)] / 11.3 (11.3) [11.8 (11.8)] km/mph
3rd	22.2 (22.5) [22.2 (22.5)] / 22.2 (22.5) [22.2 (22.5)] km/mph
4th	35.7 (37.0) [35.9 (37.0)] / 35.7 (37.0) [35.9 (37.0)] km/mph

*With 26.5R25(L3) tires

(): Data at Lock-up clutch ON

[]: Data at Power mode

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 proportioning differential (std)/limited slip differential (optional)
Oscillation angle	Total 24° (+12°, -12°)
Final drives	Heavy-duty planetary, mounted inboard

BRAKES

Service brakes	Inboard mounted fully hydraulic 4 wheel wet disc brake. Front & rear independent brake circuit
Parking brake	Spring applied, hydraulically released, located in transmission

STEERING SYSTEM

Type	Articulated frame steering
Steering angle	Each direction 37°; total 74°
Cylinders	Double-acting piston type
No. x Bore x Stroke	2 x 3.5 in x 17.7 in (2 x 90 mm x 450 mm)

HYDRAULIC SYSTEM

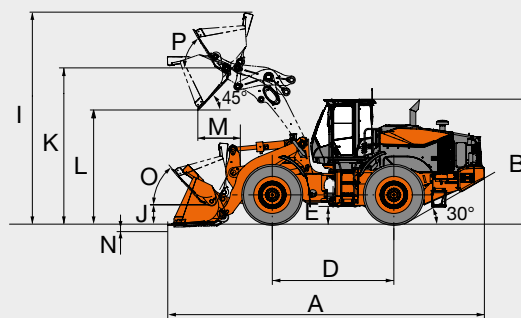
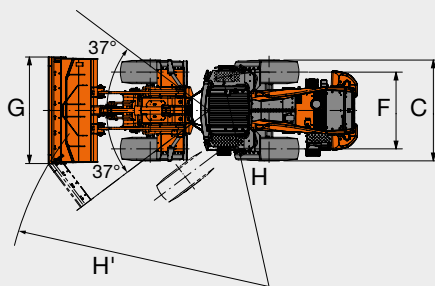
Arm and bucket are controlled by multifunction lever	
Arm controls	Four position valve; Raise, hold, lower, float
Bucket controls with automatic bucket return-to-dig control	Three position valve; Roll back, hold, dump
Main pump (Serve as steering pump)	
.....	Variable piston type
Maximum flow	79.3 gal/min (300 L/min) at 2,000 min ⁻¹ (rpm)
Maximum pressure ...	31.4 MPa
Fan pump	
.....	Gear type
Maximum flow	22.5 gal/min (85 L/min) at 2,000 min ⁻¹ (rpm)
Maximum pressure ...	16.5 MPa
Hydraulic cylinders	
Type	Double acting type
No. x Bore x Stroke ...	Arm: 2 x 5.7 in x 34.8 in (2 x 145 mm x 884 mm) Bucket: 1 x 7.1 in x 20.7 in (1 x 180 mm x 525 mm)
Filters	Full-flow 15 micron return filter in reservoir
Hydraulic cycle times	
Lift arm raise	5.6 s (5.5 s)
Lift arm lower	4.1 s (4.1 s)
Bucket dump	1.2 s (1.2 s)
Total	10.9 s (10.8 s)

(): Data at Power Mode

SERVICE REFILL CAPACITIES

Fuel tank	99.1 gal (375 L)
Engine coolant	12.4 gal (47 L)
Engine oil	6.3 gal (24 L)
Torque converter & transmission	13.5 gal (51 L)
Front axle differential & wheel hubs	12.7 gal (48 L)
Rear axle differential & wheel hubs	12.7 gal (48 L)
Hydraulic oil tank	36.2 gal (137 L)
DEF/AdBlue® tank	9.2 gal (35 L)

DIMENSIONS & SPECIFICATIONS



Bucket type			Standard arm			High lift arm
			General purpose		Light material	Light material
			Bolt-on cutting edge	Bolt-on teeth/ segment edge	Bolt-on cutting edge	Bolt-on cutting edge
Bucket capacity	ISO heaped	yd³ (m³)	5.5 (4.2)	5.5 (4.2)	6.1 (4.7)	5.5 (4.2)
	ISO struck	yd³ (m³)	4.8 (3.7)	4.8 (3.7)	5.4 (4.1)	4.8 (3.7)
A Overall length		ft (mm)	29.6 (9,025)	30.2 (9,205)	30.0 (9,140)	32.0 (9,470)
B Overall height		ft (mm)			11.6 (3,530)	
C Width over tires		ft (mm)			9.6 (2,930)	
D Wheel base		ft (mm)			11.3 (3,450)	
E Ground clearance		in (mm)			19.9 (505)	
F Tread		ft (mm)			7.3 (2,230)	
G Bucket width		ft (mm)	10.2 (3,100)	10.2 (3,120)	10.2 (3,100)	10.2 (3,100)
H Turning radius (Centerline of outside tire)		ft (mm)			20.6 (6,270)	
H' Loader clearance radius, bucket in carry position		ft (mm)	24.1 (7,335)	24.3 (7,400)	24.2 (7,365)	24.7 (7,515)
I Overall operating height		ft (mm)		20.2 (6,160)		21.6 (6,595)
J Carry height of bucket pin		ft (mm)			2.1 (650)	
K Height to bucket hinge pin, fully raised		ft (mm)		14.5 (4,425)		15.9 (4,860)
L Dumping clearance 45 degree, full height		ft (mm)	10.2 (3,095)	9.8 (2,995)	9.9 (3,010)	11.6 (3,530)
M Reach, 45 degree dump, full height		ft (mm)	4.3 (1,310)	4.7 (1,425)	4.6 (1,400)	4.4 (1,350)
N Digging depth (Horizontal digging angle)		in (mm)	4.5 (115)	5.2 (131)	4.5 (115)	4.5 (115)
O Max. roll back at carry position		deg		50		48
P Roll back angle at full height		deg			61	
Static tipping load *	Straight	lb (kg)	41,490 (18,820)	41,140 (18,660)	39,330 (17,840)	34,480 (15,640)
	Full 37 degree turn	lb (kg)	36,180 (16,410)	35,870 (16,270)	34,280 (15,550)	30,050 (13,630)
Breakout force		lb (kN)	44,740 (199)	44,740 (199)	44,060 (186)	44,740 (199)
Operating weight *		lb (ka)	53,310 (24,180)	53,420 (24,230)	54,390 (24,670)	53,890 (24,440)

Note: All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7131:2009 and ISO 7546:1983

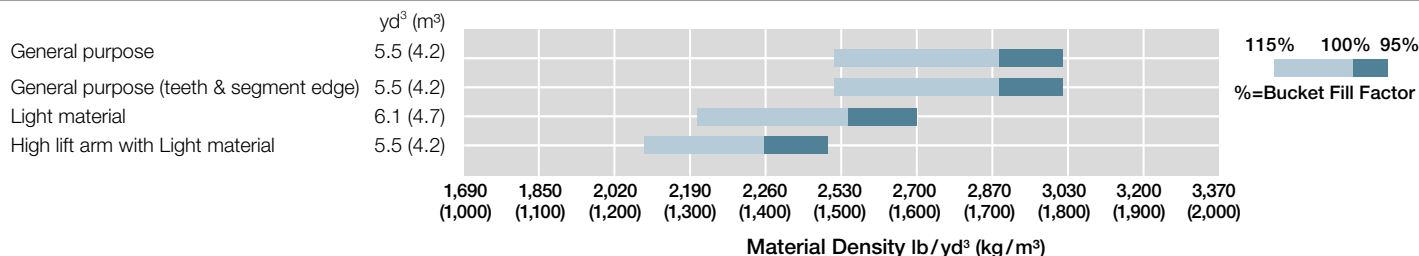
: Static tipping load and operating weight marked with include 26.5R25(L3) tires (No ballast) with lubricants, full fuel tank and operator.

Machine stability and operating weight depend on counterweight, tire size and other attachments.

WEIGHT CHANGE

Option item		Operating weight lb (kg)	Tipping load lb (kg)		Overall width in (mm) (outside tire)	Overall height in (mm)	Overall length in (mm)
			Straight	37 degree turn			
Tire	23.5R25(L3)	-1,340 (-610)	-990 (-450)	-860 (-390)	-3.3 (-85)	-2.4 (-60)	+2.0 (+50)
	26.5R25(L4)	+770 (+350)	+530 (+240)	+460 (+210)	+0.6 (+15)	+1.2 (+30)	-1.0 (-25)
	26.5R25(L5)	+1,520 (+690)	+1,080 (+490)	+950 (+430)	+0.6 (+15)	+1.2 (+30)	-1.0 (-25)
	750/65R (L3)	-460 (-210)	-350 (-160)	-310 (-140)	+1.0 (+25)	-2.4 (-60)	+2.0 (+50)
	26.5-25-20PR(L3)	-110 (-50)	-110 (-50)	-90 (-40)	±0	±0	±0
	26.5-25-20PR(L4)	+950 (+430)	+660 (+300)	+570 (+260)	±0	±0	±0
	26.5-25-20PR(L5)	+1,740 (+790)	+1,230 (+560)	+1,080 (+490)	±0	±0	±0
Belly guard (transmission)		+200 (+90)	+180 (+80)	+150 (+70)	-	-	-

BUCKET SELECTION GUIDE



EQUIPMENT

STANDARD EQUIPMENT

ENGINE

Air cleaner, double element
Auto idle shut down
Cold start (intake air heater)
Cooling fan, automatic reversible
Cummins QSL9 diesel engine
EGR System
Engine block heater 120 V
Fuel filter (Main)
Fuel pre-filter, w/water separator
Rain cap
SCR catalyst and DOC
VGT (variable geometry turbocharger)
Work mode selecto

POWERTRAIN

Brakes, service
Enclosed wet disc
Dual system
Inboard mounted
Brake, parking
Spring applied
Oil pressure released
Wet disc type
Differential, torque proportioning type (F/R)
Down-shift switch
Drive shafts, low maintenance
F-R direction selector (2-column mounted/ console mounted)
Lock-up torque converter
Quick Power switch
Transmission, automatic w/load sensing system.
Transmission declutch (3-position L/H/Off)
Transmission mode selection (3-position AUTO1/MAN/ AUTO2)
Universal joints, sealed

HYDRAULIC SYSTEM

Boom kick-out, dual (operator adjustable in cab)
Bucket positioner (horizontal)
Control lever, dual, pilot-assisted
Control lever lock (electric)
Control valve, 2-spool, parallel and tandem control
Pump, variable displacement, load-sensing
Ride control w/load sensing valve and automatic shut-off
Steering, pilot
System; open-center, high-pressure, load-sensing
Valve, anti-drift

ELECTRICAL

24-volt electrical system
Back-up alarm
Batteries (2), 12 V, 1,000 CCA
Battery disconnect switch
Camera, rear-view
Converter, 12 V/15 Amp
Horn, dual electric
Instrument panel, LCD, color
Lights:
2 Headlights (halogen)
2 Forward working lights (halogen)
4 Rear working lights (halogen)
2 Stop/tail/backup (LED)
Turn signal w/4-way flashers/marker

CAB

ROPS cab: enclosed cab with sound suppression, front & rear wipers and washers, two rear view and side mirrors, tinted glass, full view latch-back doors, sliding side windows.
Accessory outlet, 12 V
Adjustable armrest/console, (fore/aft sliding)
Air conditioner/heater/pressurizer
AM/FM/WB radio with AUX input
Ashtray
Cab dome lamps (2)
Cigarette lighter, 24 V
Coat hook
Cup holder (2)
Floormat, sweep-out
Prepped for Loadrite Scale
Retractable seat belt (3-inch)
ROPS/FOPS certified
Seat, deluxe heated w/TLV suspension (DLX8500)
Steering column, telescoping and tilting w/quick-release pedal
Steering wheel
Storage box (heated/cooled)
Storage tray
Sun visor

OTHERS

Articulation locking bar
Counterweight
Drawbar
Fenders, front, w/mudflap
Global e-service, telematic monitoring system (GSM-version w/4 yrs. service)
Ladders, inclined
Lifting eyes
Linkage pins, HN bushing
Neutral safety start
Rear grill, hinged
Steps, rear
Vandalism protection
Z-bar loader linkage

ALARMS, GAUGES, INDICATORS

Alarms (visual & audible)	Aftertreatment device
	Aftertreatment device regeneration system
	Air cleaner element
	Axle oil temperature
	Battery discharge warning
	Brake oil low pressure
	CAN network system
	DEF/AdBlue tank level/quality/system
Gauges	Engine oil low pressure
	Engine trouble
	Engine warning
	Fuel filter (water in fuel)
	Hydraulic oil level
	Hydraulic oil temperature
	Main pump oil pressure
	Overheat (engine coolant)
Indicators	Transmission oil temp
	Transmission warning
	DEF/AdBlue tank level
	Engine coolant temperature
	Fuel gauge
	Speedometer
	Tachometer
	Transmission oil temperature
	Aftertreatment device regeneration
	Air conditioner display
	Boom kick-out, dual
	Cold start
	Control lever lock
	Declutch
	ECO-Operating Status
	Fan reverse rotation
	F-N-R Selection
	F-N-R Switch enable
	High beam
	Parking brake
	Shift hold
	Time/Operating hour/ODO
	Transmission mode and status
	Turn signal w/4-way flashers/Marker
	Work light
	Work mode (Normal, Power)

OPTIONAL EQUIPMENT

Autolube
Belly guard, front chassis, transmission (rear)
Bolt-on cutting edge & segments
Bucket teeth
Counterweight, optional
E-stick steering
HID work lights
High lift boom arm
Hydraulic system, 3 spool valve
LED work lights
Quick coupler & attachments
Single lever hydraulic control w/multifunction grip

Standard and optional equipment may vary by country, so please consult your Hitachi dealer for details.