

**EXHIBIT A**

CRFQ DOT1900000125

**4 WHEEL DRIVE RUBBER TIRED LOADER with Bucket**

| Item No.                | Description:   | Make/Model & Year        | Estimated Unit Quantity | Unit Price | Item Total Cost    |
|-------------------------|--|--------------------------|-------------------------|------------|--------------------|
| 1                       | One Complete Unit: 4 Wheel Drive Rubber Tired Wheel Loader with Bucket | Hitachi ZW140-6          | 50                      | \$130,268  | \$6,513,400        |
| 2                       | Optional: Log and Lumber Forks   | Rockland LFW-20-48-72-QC | 50                      | \$9,214    | \$460,700          |
| 3                       | Optional: Land Clearing Rake   | Rockland LRC-20-QC       | 50                      | \$11,496   | \$574,800          |
| <b>Total Bid Amount</b> |  |                          |                         |            | <b>\$7,548,900</b> |

**Vendor Information**

Company Name: Anderson Equipment Company  
 Contact Manager: Brian Hahn  
 Address: 1 Andy's Way  
S. Charleston, WV 25309  
 Phone: 304-756-2800  
 Fax: 304-756-2799  
 Email: bhahn@andersonequip.com  
 Signature: Brian Hahn

RECEIVED

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WV PURCHASING DIVISION

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: DOT1900000125**

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**

(Check the box next to each addendum received)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2            | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3            | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Anderson Equipment Company  
Company  
B. A. A.  
Authorized Signature  
4/24/19  
Date

**NOTE:** This addendum acknowledgement should be submitted with the bid to expedite document processing.  
Revised 6/8/2012

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

**CONSTRUCTION CONTRACTS:** Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

**ALL CONTRACTS:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: Anderson Equipment Company

Authorized Signature: [Signature] Date: 7/24/19

State of West Virginia

County of Kanawha to-wit:

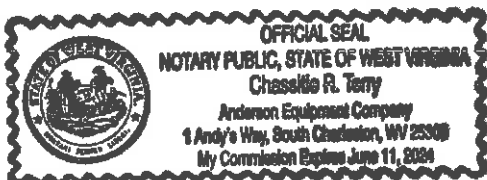
Taken, subscribed, and sworn to before me this 24<sup>th</sup> day of July, 2019

My Commission expires June 11, 2024

AFFIX SEAL HERE

NOTARY PUBLIC [Signature]

Purchasing Affidavit (Revised 01/18/2018)



West Virginia Ethics Commission  
Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: Anderson Equipment Company Address: 1 Andy's Way  
5. Charleston, WV 25309  
Name of Authorized Agent: Brian Hahn Address: 1 Andy's Way S. Charleston  
WV, 25309  
Contract Number: DOT1900000125 Contract Description: 4WD Rubber Tired Wheel  
Loader w/ Bucket  
Governmental agency awarding contract: WV Division of Highways

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

1. Subcontractors or other entities performing work or service under the Contract  
 Check here if none, otherwise list entity/individual names below.
2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)  
 Check here if none, otherwise list entity/individual names below.
3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)  
 Check here if none, otherwise list entity/individual names below.

Signature: [Signature] Date Signed: 7/24/19

Notary Verification

State of West Virginia, County of Kanawha:

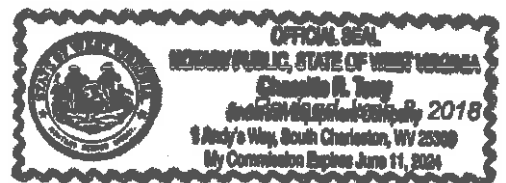
I, Brian Hahn, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 24th day of July 2019.

[Signature]  
Notary Public's Signature

To be completed by State Agency:

Date Received by State Agency: \_\_\_\_\_  
Date submitted to Ethics Commission: \_\_\_\_\_  
Governmental agency submitting Disclosure: \_\_\_\_\_



**REQUEST FOR QUOTATION**  
**CRFQ DOT1900000125**  
**(Class 353) 4WD Rubber Tired Wheel Loader with Bucket (7019EC15)**

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7.2.3 Any other remedies available in law or equity.

**8. MISCELLANEOUS:**

- 8.1 No Substitutions:** Vendor shall supply only Contract Items submitted in response to the Solicitation unless a contract modification is approved in accordance with the provisions contained in this Contract.
- 8.2 Reports:** Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.
- 8.3 Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager: Brian Hahn  
Telephone Number: 304-756-2800  
Fax Number: 304-756-2799  
Email Address: bhahn@andersonequip.com

ZW-6 series

HITACHI

Reliable solutions

# ZW120/140/150/150PL



## WHEEL LOADER

| Model:                    | ZW120-6   | ZW140-6   | ZW150-6   | ZW150PL-6                                 |
|---------------------------|---|---|---|---|
| Gross engine rated power: | 101 hp/74 kW (ISO14396)                           | 141 hp/104 kW (ISO14396)                          | 141 hp/104 kW (ISO14396)                          | 141 hp/104 kW (ISO14396)                  |
| Operating weight:         | 18,590–19,850 lb<br>(8,430–9,000 kg)              | 25,640–26,150 lb<br>(11,610–11,820 kg)            | 26,960–27,470 lb<br>(12,230–12,460 kg)            | 26,960–27,470 lb<br>(12,230–12,460 kg)    |
| Bucket ISO heaped:        | 2.0–2.4 yd <sup>3</sup> (1.5–1.8 m <sup>3</sup> ) | 2.7–3.1 yd <sup>3</sup> (2.1–2.4 m <sup>3</sup> ) | 3.1–3.5 yd <sup>3</sup> (2.4–2.7 m <sup>3</sup> ) | 2.7 yd <sup>3</sup> (2.1 m <sup>3</sup> ) |

# NO COMPROMISE

Offering exceptional levels of performance without compromising on efficiency, Hitachi ZW-6 wheel loaders are designed to satisfy the requirements of the North American construction industry.

Designed to be reliable, durable and versatile for a variety of job sites, and to operate with low levels of fuel consumption, they incorporate the high-quality engineering for which Hitachi is renowned.



**6. FIRST FOR RELIABILITY**



**8. DEDICATED TO DURABILITY**



**10. INCREDIBLE VERSATILITY**



**12. INDUSTRY-LEADING QUALITY**



**14. UNIQUE TECHNOLOGY**



# DEMAND PERFECTION

Designed and built with an emphasis on the environment, operator comfort and safety, the ZW-6 wheel loaders have been developed to perfection. They incorporate industry-leading technology created in Japan to meet the highest standards for performance at the lowest possible costs of ownership.



**Powerful performance**  
Quick power switch increases engine output when required.



**Industry-leading safety**  
360° visibility from the cab.



**Easy to operate**  
The hydrostatic transmission enhances versatility and increases productivity.



**Smooth operation**  
Ride control minimizes machine pitching.



**Superior comfort**  
Spacious cab with several storage compartments.





**Enhanced design**

Excellent rear view thanks to the curved engine hood.



**Quieter performance**

New materials in the cab absorb sound to reduce noise levels.



**Enhanced fuel efficiency**

New Tier 4 Final engine without DPF.



**Low running costs**

6%\* fuel saving in V-shaped loading (19%\* in travelling operations).

\*ZW140-6/ZW150-6/  
ZW150PL-6 only



**Exceptional durability**

Developed in-house, the front frame has been reinforced (ZW140-6 and ZW150-6).



**Convenient access**

Easy-to-open wide engine covers.

# FIRST FOR RELIABILITY

Renowned for reliability, Hitachi ZW-6 wheel loaders achieve exceptional levels of performance and efficiency with minimum downtime. The ZW120-6/ZW140-6/ZW150-6/ZW150PL-6 have been designed with several user-friendly features that ensure quick and easy maintenance, and also contribute to lower running costs.

## Minimal downtime

The battery compartment can be accessed easily for maintenance and battery replacement. This results in minimal downtime and a high level of accessibility.

## Quick access

The side engine cover opens fully for convenient access. This helps to ensure routine maintenance is completed quickly to ensure a reliable performance.

## Improved fuel efficiency

The ZW-6 demonstrates greater fuel efficiency than the previous model during V-shape loading and load and carry

operations. This results in considerable savings for running costs.

## Easy maintenance

For safer and easier maintenance, the battery disconnect switch is now standard. This helps to avoid electrical accidents and retain battery energy during long-term storage.

## Reduced cost

The new Tier 4 Final certified engine does not require a diesel particulate filter, which further reduces fuel consumption and maintenance costs.



Easy access to the engine compartment.



The battery is easy to maintain.



New engine reduces fuel consumption.



Reinforced front frame in the ZW140-6, 150-6 and 150PL-6.



Wide fin coolers reduce heat and increase radiator durability



**i** The final pre-delivery inspection procedure for each Hitachi wheel loader is typical of Hitachi's dedication to manufacturing products of unfailing quality in response to customer needs.



## DEDICATED TO DURABILITY

Strengthened components, robust materials and additional reinforcement for key features ensure the durability. They also contribute to its reliable operation, particularly when working in challenging environments.



### **Added protection**

The optional belly guard protects the machine powertrain and driveshaft from potential damage caused by materials on the ground.

### **Strengthened components**

Heavy-duty axles, designed in-house, have been incorporated into the design to improve durability.

### **Durable materials**

High-quality radiators improve resistance to corrosion and enhance the overall durability.

### **Maximum uptime**

Standard anti-clogging radiators (WPFR) are designed with square-shaped instead of triangular-shaped fins to prevent clogging. This reduces radiators maintenance frequency.

The optional belly guard provides added protection.

# INCREDIBLE VERSATILITY

ZW-6 wheel loaders are often described as a perfect fit by Hitachi customers, which illustrates their versatility for a wide range of applications and job sites. In addition, they are smooth and efficient to operate, and offer increased productivity and greater fuel efficiency.

## **Efficient flexibility**

The quick power switch increases engine output when more power is instantly required, or when driving uphill.

## **Enhanced rear visibility**

The muffler and air intake have been repositioned and aligned to improve the rear-view visibility from the cab, enhancing safety on a variety of job sites.

## **High efficiency**

When working in snowy, slippery or muddy conditions, the traction control system helps to avoid tire slippage, and ultimately prevents wear and fuel waste, and lowers

running costs. It is highly effective for light applications.

## **Parallel lift arm**

The ZW150PL-6 provides parallel movement from ground level. Perfect for loading and unloading items with increased load control.

## **Superior performance**

The rimpull control system allows for a superior digging performance by striking a balance between rimpull and front digging force. Rimpull can be adjusted to varying degrees, depending on the work mode.



Rear visibility has been enhanced by design modifications.



The ride control feature ensures smooth performance.



The traction control system reduces tire slippage in wet or wintry conditions.





The cab provides a quiet and comfortable working environment.



Easy access for maintenance from ground level.

**i** Hitachi conducts user tests in Japan to assess the features of its wheel loaders. Results have revealed an unrivaled level of control.



## INDUSTRY-LEADING QUALITY

To set industry-leading standards in terms of performance, reliability, comfort and safety, the ZW120/ZW140-6/ZW150-6/ZW150PL-6 have been built using components of the highest quality. Its clever design offers 360° visibility from the cab and ensures it is one of the quietest wheel loaders in its class.

### Reduced emission

A selective catalytic reduction (SCR) system injects urea into exhaust gas to reduce nitrous oxide from emissions. This cutting-edge technology not only helps the environment, but also complies with Tier 4 Final emission regulations.

### Easy access

The engine air filter has been relocated to the rear of the engine compartment, providing easier access at ground level for maintenance. The urea tank is also positioned for convenience.

### Excellent visibility

The 360° panoramic view of the spacious cab creates a comfortable working environment, and helps to increase safety and productivity. The optional rear-view camera also contributes to excellent all-round visibility and safety on the job site.

### Improved comfort

Sound insulation has been improved in the cab to significantly reduce noise levels and provide a quieter working environment for operators. The low-noise engine also results in a quieter performance, which makes it suitable for working in urban areas.



The optional rear-view camera contributes to all-round visibility.

# UNIQUE TECHNOLOGY

Advanced technology developed by Hitachi is at the heart of the ZW-6 wheel loaders. It has an impact on everything, from the wheel loader's environmental performance to the comfort and safety of its operator. A technology-led approach enables Hitachi to meet the evolving needs of the construction industry, and improve the experience of its customers.

## Reduced maintenance

A new Tier 4 Final certified engine contains a high-volume cooled exhaust gas recirculation (EGR) system, a common rail-type fuel injection system and a diesel oxidation catalyst (DOC). This helps to reduce fuel costs and maintenance requirements.

## Smaller environmental impact

The standard auto idle shutdown feature\* helps to prevent fuel waste, as well as reduce noise levels, exhaust emissions and CO<sub>2</sub> levels in the medium wheel loaders.

\*ZW140-6/ZW150-6/ZW150PL-6 only

## Optimum performance

The 1st speed select switch in combination with the creep mode switch\* optimize the usage on different job sites and with hydraulic attachments.

\*ZW140-6/ZW150-6/ZW150PL-6 only

## Remote monitoring

Global e-Service allows the owners to monitor their Hitachi machines remotely via Owner's Site (24/7 online access) and ConSite (an automatic monthly report). These help to maximize efficiency, minimize downtime and improve overall performance.

## Smooth operation

The ZW120-6, ZW140-6, and ZW150-6 are easy to maneuver thanks to the HST control system. The operator can choose between two work modes according to the task and terrain, and it enables a smooth transition between speeds.



1st speed select switch optimize performance on different job sites.



The HST control system enables a smooth performance.



The new engine and SCR system have a smaller environmental impact.

# REDUCING THE TOTAL COST OF OWNERSHIP



Hitachi has created the Support Chain after-sales program to ensure optimum efficiency, as well as minimal downtime, reduced running costs and high resale values.

## Global e-Service

Hitachi has developed two remote monitoring systems as part of its Global e-Service online application. Owner's Site and ConSite are an integral part of the wheel loader, which sends operational data daily via GMS to [www.globaleservice.com](http://www.globaleservice.com). This allows immediate access to the Owner's Site, and the vital information that is required for support on job sites.

Comparing the ratio of operating and non-operating hours helps to enhance efficiency. Effective management of maintenance programs helps to maximize availability. Running costs can

also be managed by analyzing the fuel consumption. The location and movements of each machine are clearly displayed for essential planning.

An automatic service report — ConSite — sends a monthly email summarizing the information from Global e-Service for each machine. This includes: daily working hours and fuel consumption data; statistics on the operating mode ratio, plus a comparison for fuel consumption/efficiency, and emissions.

## Technical support

Each Hitachi service technician receives full technical training from HCMA in the USA. These sessions provide access to the same technical knowledge available within the Hitachi quality assurance departments and design centers. Technicians combine this global expertise with the local language and culture of the customer to provide the highest level of after-sales support.

## Extended warranty and service contracts

Every new Hitachi ZW-6 model is covered by a full manufacturer's warranty. For extra protection — due to severe working



conditions or to minimize equipment repair costs — Hitachi dealers offer a unique extended warranty called HELP (Hitachi Extended Life Program) and comprehensive service contracts. These can help to optimize the performance of each machine, reduce downtime and ensure higher resale values.

## Parts

Hitachi offers a wide range and a high availability of parts provided by HCMA's US parts warehouse.

- Hitachi Genuine Parts: allow machines to work longer, with lower running and maintenance costs.
- Hitachi Select Parts and Genuine Parts: are of proven quality and come with the manufacturer's warranty.

- Performance Parts: to cope with highly demanding conditions, they have been engineered for greater durability, better performance or longer life.
- Genuine Hitachi rebuilt components are available from HCMA's in-house rebuild center and are offered with a standard warranty.

Whatever the choice, the renowned quality of Hitachi construction machinery is assured.



## BUILDING A BETTER FUTURE

Established in 1910, Hitachi, Ltd. was built upon a founding philosophy of making a positive contribution to society through technology. This is still the inspiration behind the Hitachi group's reliable solutions that answer today's challenges and help to create a better world.

Hitachi, Ltd. is now one of the world's largest corporations, with a vast range of innovative products and services. These have been created to challenge convention, improve social infrastructure and contribute to a sustainable society.

Hitachi Construction Machinery Co., Ltd. (HCM) was founded in 1970 as a subsidiary of Hitachi, Ltd. and has become one of the world's largest construction equipment suppliers. A pioneer in producing hydraulic excavators, HCM also manufactures wheel loaders, rigid dump trucks, crawler cranes and special application machines at state-of-the-art facilities across the globe.

Incorporating advanced technology, Hitachi construction machinery has a reputation for the highest quality standards. Suitable for a wide range of industries, it is always hard at work around the world – helping to create infrastructure for a safe and comfortable way of living, developing natural resources and supporting disaster relief efforts.

Hitachi ZW wheel loaders are renowned for being reliable, durable and versatile – capable of delivering the highest levels of productivity under the most challenging of conditions. They are designed to provide owners with a reduced total cost of ownership, and operators with the ultimate level of comfort and safety.

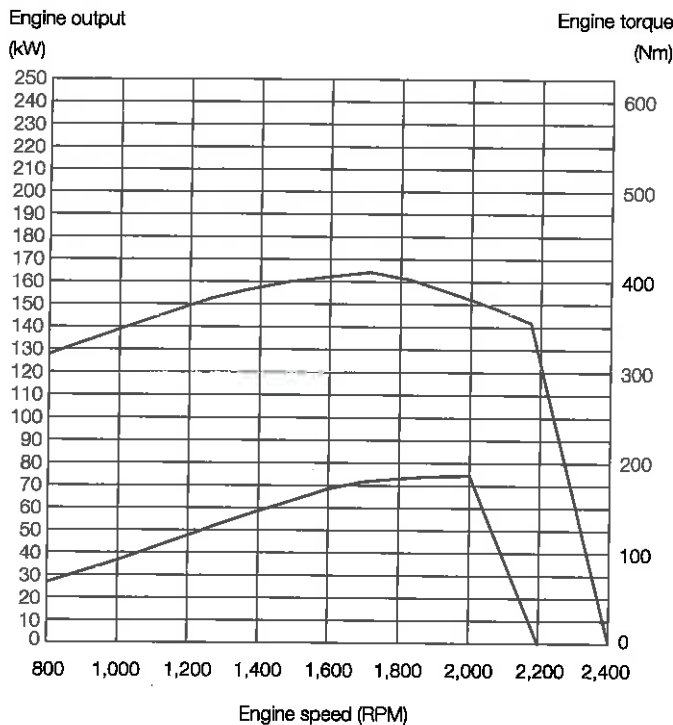


# SPECIFICATIONS

ZW120-6

## ENGINE

|                           |   |
|---------------------------|---|
| Model .....               | DEUTZ TCD3.6L4F                                   |
| Type .....                | 4-cycle water-cooled, direct injection            |
| Aspiration .....          | Turbocharger and intercooled                      |
| Aftertreatment .....      | DOC and SCR system                                |
| No. of cylinders .....    | 4   |
| Maximum rated power       |   |
| ISO 14396, gross .....    | 101 hp (74 kW) at 2,000 min <sup>-1</sup> (rpm)   |
| ISO 9249, net .....       | 96 hp (71 kW) at 2,000 min <sup>-1</sup> (rpm)    |
| Maximum torque .....      | 400 Nm at 1,600 min <sup>-1</sup> (rpm)           |
| Bore and stroke .....     | 3.9 in x 4.7 in (98 mm x 120 mm)                  |
| Piston displacement ..... | 221 in <sup>3</sup> (3.621 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 |



## POWERTRAIN

|                                |  |
|--------------------------------|--|
| Transmission .....             | Electrical-controlled 1 motor hydrostatic transmission with gear box, Gear box: Fixed gear ratio, powershift countershaft type |
| Cooling method .....           | Forced circulation type  |
| Travel speed* Forward/Reverse  |  |
| 1st .....                      | 11.5/7.1 km/mph  |
| 2nd .....                      | 21.4/34.5 km/mph   |
| * With 17.5-25-12PR (L-2) tire |  |

## AXLE AND FINAL DRIVE

|                                       |   |
|---------------------------------------|---|
| Drive system .....                    | Four-wheel drive system                                   |
| Front & rear axle .....               | Semi-floating   |
| Front .....                           | Fixed to the front frame                                  |
| Rear .....                            | Trunnion support  |
| Reduction and differential gear ..... | Two stage reduction with torque proportional differential |
| Oscillation angle .....               | Total 20° (+10°, -10°)                                    |
| Final drives .....                    | Heavy-duty planetary, mounted inboard                     |

## BRAKES

|                      |  |
|----------------------|--|
| Service brakes ..... | Inboard mounted fully hydraulic 4 wheel wet disc brakes. Front & rear independent brake circuit, HST (Hydro Static Transmission) system provides additional hydraulic braking capacity |
| Parking brakes ..... | Spring applied, hydraulically released, wet disc type  |

## STEERING SYSTEM

|                           |   |
|---------------------------|---|
| Type .....                | Articulated frame steering                |
| Steering angle .....      | Each direction 40°; total 80°             |
| Cylinders .....           | Double-acting piston type                 |
| No. x Bore x Stroke ..... | 2 x 2.4 in x 15.6 in (2 x 60 mm x 395 mm) |

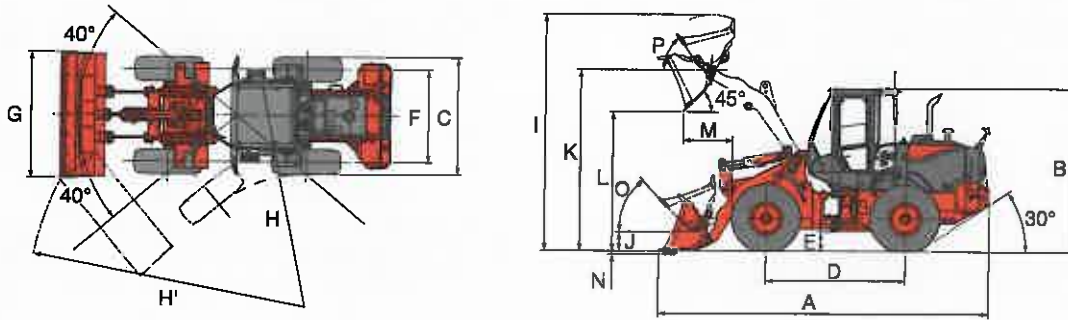
## HYDRAULIC SYSTEM

|   |  |
|---|--|
| Arm and bucket are controlled by multi function control lever     |  |
| Arm controls .....  | Four position valve; Raise, hold, lower, float   |
| Bucket controls with automatic bucket return to-dig control ..... | Three position valve; Roll back, hold, dump  |
| Main pump (Load & steer)  |  |
| .....   | Gear type 32.0 gal/min (121 L/min) at 2,000 min <sup>-1</sup> (rpm) at 20.6 MPa (210 kgf/cm <sup>2</sup> ) |
| Relief pressure setting .....                                     | 20.6 MPa (210 kgf/cm <sup>2</sup> )  |
| HST charging pump .....   | Gear type 10.4 gal/min (39.2 L/min) at 2,000 min <sup>-1</sup> (rpm) at 2.5 MPa (25 kgf/cm <sup>2</sup> )  |
| Transmission charging pump .....                                  | Gear type 5.9 gal/min (22 L/min) at 2,000 min <sup>-1</sup> (rpm) at 1.8 MPa (18 kgf/cm <sup>2</sup> )     |
| Hydraulic cylinders   |  |
| Type .....  | Double acting type   |
| No. x Bore x Stroke ...   | Arm: 2 x 4.1 in x 28.0 in (2 x 105 mm x 710 mm)<br>Bucket: 1 x 4.9 in x 17.5 in (1 x 125 mm x 445 mm)      |
| Filters .....   | Full-flow 10 micron return filter in reservoir   |
| Hydraulic cycle times   |  |
| Lift arm raise .....  | 6.6 s  |
| Lift arm lower .....  | 2.7 s  |
| Bucket dump .....   | 1.6 s  |
| Total .....   | 10.9 s   |

## SERVICE REEFL CAPACITIES

|  |                   |
|--|-------------------|
| Fuel tank .....                            | 39.62 gal (150 L) |
| Engine coolant .....                       | 4.20 gal (16 L)   |
| Engine oil .....                           | 2.80 gal (10.5 L) |
| Front axle differential & wheel hubs ..... | 3.70 gal (14 L)   |
| Rear axle differential & wheel hubs .....  | 3.70 gal (14 L)   |
| Hydraulic oil tank .....                   | 19.8 gal (75 L)   |
| DEF/AdBlue® tank .....                     | 4.50 gal (17 L)   |

DIMENSIONS & SPECIFICATIONS



| Bucket type  |                     |           | Standard arm         |                | High lift arm   |
|--|---------------------|-----------|----------------------|----------------|-----------------|
|  |                     |           | General purpose      |                | General purpose |
|  |                     |           | Bolt-on cutting edge |                |                 |
| Bucket capacity                                      | ISO heaped          | yd³ (m³)  | 2.0 (1.5)            | 2.4 (1.8)      | 2.0 (1.5)       |
|  | ISO struck          | yd³ (m³)  | 1.6 (1.2)            | 1.5 (1.4)      | 1.6 (1.2)       |
| A Overall length                                     |                     | ft (mm)   | 21.0 (6,545)         | 21.3 (6,650)   | 21.0 (7,105)    |
| B Overall height                                     |                     | ft (mm)   |                      | 10.5 (3,210)   |                 |
| C Width over tires                                   |                     | ft (mm)   |                      | 7.4 (2,270)    |                 |
| D Wheel base   |                     | ft (mm)   |                      | 8.9 (2,725)    |                 |
| E Ground clearance                                   |                     | in (mm)   |                      | 14.6 (370)     |                 |
| F Tread  |                     | ft (mm)   |                      | 6.0 (1,820)    |                 |
| G Bucket width                                       |                     | ft (mm)   |                      | 8.0 (2,450)    |                 |
| H Turning radius (Centerline of outside tire)        |                     | ft (mm)   |                      | 16.2 (4,915)   |                 |
| H' Loader clearance circle, bucket in carry position |                     | ft (mm)   | 17.8 (5,430)         | 17.9 (5,460)   | 18.4 (5,610)    |
| I Overall operating height                           |                     | ft (mm)   | 15.3 (4,650)         | 15.6 (4,760)   | 16.4 (4,990)    |
| J Carry Height of bucket pin                         |                     | ft (mm)   | 1.5 (455)            | 1.5 (455)      | 1.5 (455)       |
| K Height to bucket hinge pin, fully raised           |                     | ft (mm)   | 11.7 (3,560)         | 11.7 (3,560)   | 12.8 (3,900)    |
| L Dumping clearance 45 degree, full height           |                     | ft (mm)   | 8.9 (2,705)          | 8.6 (2,630)    | 10.0 (3,040)    |
| M Reach, 45 degree dump, full height                 |                     | ft (mm)   | 3.3 (1,010)          | 3.5 (1,080)    | 3.9 (1,190)     |
| N Digging depth (Horizontal digging angle)           |                     | in (mm)   | 2.8 (70)             | 2.8 (70)       | 8.3 (210)       |
| O Max. roll back at carry position                   |                     | deg       |                      | 49             | 50              |
| P Roll back angle at full height                     |                     | deg       |                      | 56             | 52              |
| Static tipping load *                                | Straight            | lb (kg)   | 14,330 (6,500)       | 14,200 (6,440) | 12,940 (5,870)  |
|  | Full 40 degree turn | lb (kg)   | 12,390 (5,620)       | 12,240 (5,550) | 11,140 (5,050)  |
| Breakout force                                       |                     | lbf (kgf) | 16,840 (7,520)       | 14,970 (6,790) | 16,590 (7,520)  |
|  |                     | kN        | 74.9                 | 66.6           | 73.8            |
| Operating weight *                                   |                     | lb (kg)   | 18,590 (8,430)       | 18,760 (8,510) | 19,850 (9,000)  |

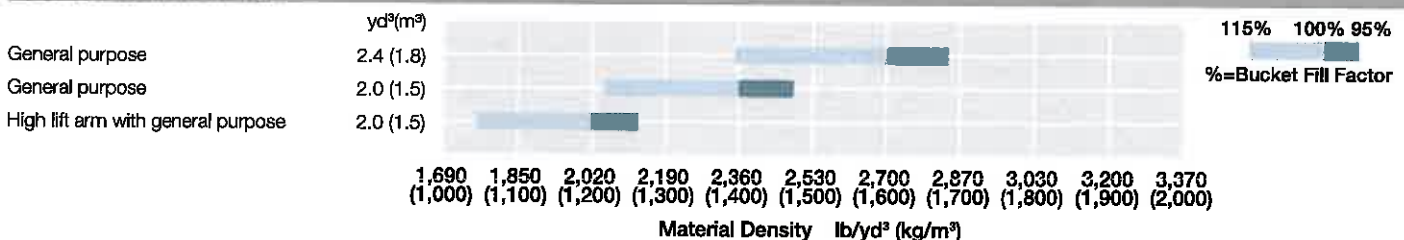
Note: All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7137:2009 and ISO 7546:1983

\*: Static tipping load and operating weight marked with\* include 17.5-25-12PR (L-2) tires (No ballast) with lubricants, full fuel tank and operator.  
Machine stability and operating weight depend on counterweight, tire size and other attachments.

WEIGHT & SPECIFICATION CHANGES

| Option item  | Operating weight<br>lb (kg) | Tipping load lb (kg) |           | Overall width<br>in (mm)<br>(outside tire) | Overall height<br>in (mm) | Overall length<br>in (mm) |
|--------------|-----------------------------|----------------------|-----------|--|---------------------------|---------------------------|
|              |                             | Straight             | Full turn |  |                           |                           |
| Tire 17.5R25 | ±0                          | ±0                   | ±0        | ±0   | ±0                        | ±0                        |
| Belly guard  | +154 (70)                   | +132 (60)            | +110 (50) | ±0   | ±0                        | ±0                        |

BUCKET SELECTION GUIDE



### STANDARD EQUIPMENT

#### ENGINE

|                                       |
|---------------------------------------|
| Air cleaner, double element           |
| Cold start (glow plug)                |
| Cooler, wide fin                      |
| Deutz TCD36 diesel engine             |
| EGR system                            |
| Fuel filter (main), w/water separator |
| Fuel pre-filter, w/water separator    |
| SCR catalyst and DOC                  |
| Work mode selector                    |

#### POWERTRAIN

|  |
|--|
| Brakes, service                          |
| Enclosed wet disc                        |
| Dual system                              |
| Inboard mounted                          |
| Brake, parking                           |
| Spring applied                           |
| Oil pressure released                    |
| Wet disc type                            |
| Differential, torque proportioning (F/R) |
| Drive shafts, low maintenance            |
| Hydrostatic transmission                 |
| Inching pedal                            |
| Maximum speed adjuster for 1st speed     |
| Traction control                         |

#### HYDRAULIC SYSTEM

|  |
|--|
| Boom kick-out, dual (operator adjustable in cab)         |
| Bucket positioner  |
| Control lever, single, pilot-assisted                    |
| Control lever lock (electric)                            |
| Control valve, 3-spool ready, parallel control           |
| Ride control w/load sensing valve and automatic shut-off |
| Quick coupler control, lines and controls                |
| Pump, gear, fixed displacement                           |
| Steering, orbital  |

#### ELECTRICAL

|                                     |
|-------------------------------------|
| 24-volt electrical system           |
| Back-up alarm                       |
| Battery disconnect switch           |
| Converter, 12V/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, 12V,  |
| Adjustable armrest/console, (fore/aft sliding)  |
| Air conditioner/heater/pressurizer  |
| AM/FM/WB radio with AUX input   |
| Ashtray   |
| Cab dome lamps (2)  |
| Cigarette lighter   |
| Coat hook   |
| Cooler box storage area   |
| Cup holder (2)  |
| Floor mat   |
| Retractable seat belt (3 inch)  |
| ROPS/FOPS certified   |
| Seat, air suspension, fabric  |
| Steering column, telescoping and tilting w/quick-release pedal  |
| Storage box (heated/cooled)   |
| Sun visor   |

#### OTHERS

|  |
|--|
| Articulation locking bar   |
| Counterweight  |
| Drawbar  |
| Global e-Service, telematic monitoring system (GSM-version w/4 yrs. service) |
| Ladders, inclined  |
| Lifting eyes   |
| Linkage pins, HN bushing   |
| Neutral safety start   |
| Steps, rear  |
| Z-bar loader linkage   |

#### ALARMS, GAUGES, INDICATORS

|                                     |
|-------------------------------------|
| Alarms (visual & audible)           |
| Brake oil low pressure              |
| Engine oil low pressure             |
| Gauges                              |
| DEF/AdBlue® Level                   |
| Engine coolant temperature          |
| Fuel gauge                          |
| Overheat (engine coolant)           |
| Indicators                          |
| Aftertreatment Device               |
| Air cleaner element                 |
| Air conditioner display             |
| Battery discharge warning           |
| Cold start                          |
| Control lever lock                  |
| Eco-operating status                |
| Emergency steering                  |
| Engine warning                      |
| Fan reverse rotation                |
| Fuel filter (water in fuel)         |
| High beam                           |
| HST oil temperature                 |
| HST warning                         |
| Maintenance                         |
| Operating mode (Normal, Power)      |
| Parking brake                       |
| Ride control                        |
| Service                             |
| Speedometer                         |
| Time/operating hour/ODO             |
| Traction control switch             |
| Turn signal w/4-way flashers/marker |
| Work light                          |

#### OPTIONAL EQUIPMENT

|   |
|---|
| Belly guard, front chassis, transmission (rear) |
| Bolt-on cutting edge & segments                 |
| Camera, rear view                               |
| Fenders, rear, full, w/mudflap                  |
| HID work lights                                 |
| High lift boom arm                              |
| Hydraulic system, 3rd function control          |
| LED work lights                                 |
| Pre-cleaner (turbine type)                      |
| Quick coupler & attachments                     |
| Seat, heated                                    |
| Secondary steering                              |

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

# MEMO



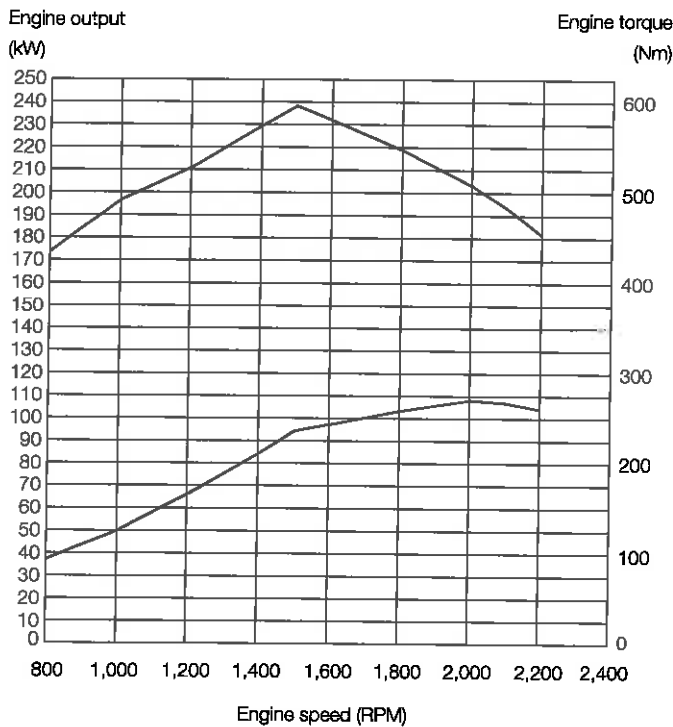
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# SPECIFICATIONS

## ZW140-6/ZW150-6/ZW150PL-6

### ENGINE

|                           |   |
|---------------------------|---|
| Model .....               | CUMMINS QSB4.5                                    |
| Type .....                | 4-cycle water-cooled, direct injection            |
| Aspiration .....          | Turbocharger and intercooled                      |
| Aftertreatment .....      | DOC and SCR system                                |
| No. of cylinders .....    | 4   |
| Maximum rated power       |   |
| ISO 14396, gross .....    | 141 hp (104 kW) at 2,200 min <sup>-1</sup> (rpm)  |
| ISO 9249, net .....       | 140 hp (103 kW) at 2,200 min <sup>-1</sup> (rpm)  |
| Maximum torque .....      | 597 Nm at 1 500 min <sup>-1</sup> (rpm)           |
| Bore and stroke .....     | 4.2 in x 4.9 in (107 mm x 124 mm)                 |
| Piston displacement ..... | 272.1 in <sup>3</sup> (4.460 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 |



### POWERTRAIN

|                               |  |
|-------------------------------|--|
| Transmission .....            | Electrical-controlled 2 motor hydrostatic transmission with summation gear box, Gear box: Fixed gear ratio, powershift countershaft type |
| Cooling method .....          | Forced circulation type  |
| Travel speed* Forward/Reverse |  |
| 1st .....                     | 7.0/4.3 km/mph   |
| 2nd .....                     | 13.0/8.0 km/mph  |
| 3rd .....                     | 20.0/12.42 km/mph  |
| 4th .....                     | 39.0/24.2 km/mph   |
| * With 20.5 R25 (L3) tires    |  |

### 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 limited slip differential |
| Oscillation angle .....               | Total 20° (+10°, -10°)                             |
| Final drives .....                    | Heavy-duty planetary, mounted inboard              |

### BRAKES

|                      |  |
|----------------------|--|
| Service brakes ..... | Inboard mounted fully hydraulic 4 wheel wet disc brakes. Front & rear independent brake circuit, HST (Hydro Static Transmission) system provides additional hydraulic braking capacity |
| Parking brakes ..... | Spring applied, hydraulically released, wet disc type  |

### STEERING SYSTEM

|                           |   |
|---------------------------|---|
| Type .....                | Articulated frame steering                |
| Steering angle .....      | Each direction 40°; total 80°             |
| Cylinders .....           | Double-acting piston type                 |
| No. x Bore x Stroke ..... | 2 x 2.6 in x 16.5 in (2 x 65 mm x 419 mm) |

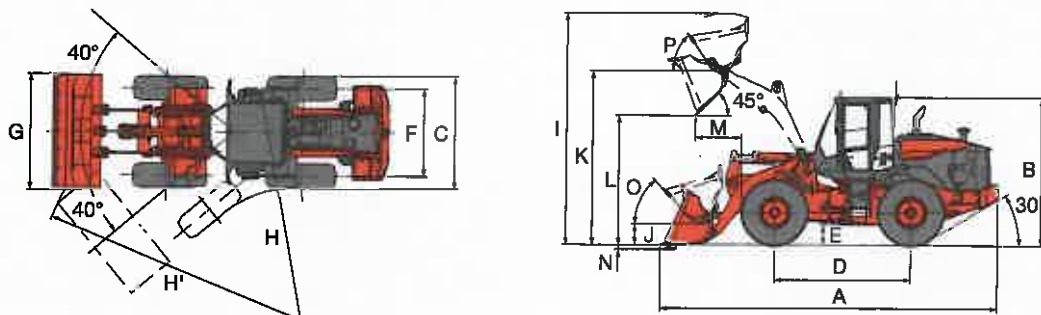
### HYDRAULIC SYSTEM

|   |  |           |
|---|--|-----------|
| Arm and bucket are controlled by multi function control lever     |  |           |
| Arm controls .....  | Four position valve; Raise, hold, lower, float   |           |
| Bucket controls with automatic bucket return to-dig control ..... | Three position valve; Roll back, hold, dump  |           |
| Main pump (Load & steer)  |  |           |
| .....   | Gear type 51.2 gal/min (194 L/min) at 2 200 min <sup>-1</sup> (rpm) at 20.6 MPa (210 kgf/cm <sup>2</sup> ) |           |
| Relief pressure setting .....                                     | 20.6 MPa (210 kgf/cm <sup>2</sup> )  |           |
| HST charging pump .....   | Gear type 14.2 gal/min (53.9 L/min) at 2,200 min <sup>-1</sup> (rpm) at 2.45 MPa (25 kgf/cm <sup>2</sup> ) |           |
| Transmission charging pump .....                                  | Gear type 4.6 gal/min (17.6 L/min) at 2,200 min <sup>-1</sup> (rpm) at 1.96 MPa (20 kgf/cm <sup>2</sup> )  |           |
| ZW140-6/ZW150-6 Hydraulic cylinders                               |  |           |
| Type .....  | Double acting type   |           |
| No. x Bore x Stroke ...   | Arm: 2 x 4.9 in x 29.9 in (2 x 125 mm x 760 mm)<br>Bucket: 1 x 5.9 in x 19.5 in (1 x 150 mm x 495 mm)      |           |
| ZW150PL-6 Hydraulic cylinders                                     |  |           |
| Type .....  | Double acting type   |           |
| No. x Bore x Stroke ...   | Arm: 2 x 4.9 in x 29.9 in (2 x 125 mm x 760 mm)<br>Bucket: 2 x 4.3 in 39.6 in (2 x 110 mm x 1 005 mm)      |           |
| Filters .....   | Full-flow 10 micron return filter in reservoir   |           |
| Hydraulic cycle times   | ZW140-6/ZW150-6  | ZW150PL-6 |
| Lift arm raise .....  | 6.0 s  | 6.0 s     |
| Lift arm lower .....  | 4.5 s  | 3.4 s     |
| Bucket dump .....   | 1.4 s  | 3.4 s     |
| Total .....   | 11.9 s   | 12.8 s    |

### SERVICE REFILL CAPACITIES

|  |                  |
|--|------------------|
| Fuel tank .....                            | 50.2 gal (190 L) |
| Engine coolant .....                       | 2.6 gal (10 L)   |
| Engine oil .....                           | 4.2 gal (16 L)   |
| Front axle differential & wheel hubs ..... | 6.6 gal (25 L)   |
| Rear axle differential & wheel hubs .....  | 6.6 gal (25 L)   |
| Hydraulic oil tank .....                   | 21.1 gal (80 L)  |
| DEF/AdBlue® tank .....                     | 3.2 gal (12 L)   |

DIMENSIONS & SPECIFICATIONS



| Bucket type  |                     |          | Standard arm         |                      | High lift arm        |
|--|---------------------|----------|----------------------|----------------------|----------------------|
|  |                     |          | General purpose      | General purpose      | General purpose      |
|  |                     |          | Bolt-on cutting edge | Bolt-on cutting edge | Bolt-on cutting edge |
| Bucket capacity                                      | ISO heaped          | yd³ (m³) | 2.7 (2.1)            | 3.1 (2.4)            | 2.7 (2.1)            |
|  | ISO struck          | yd³ (m³) | 2.4 (1.8)            | 2.6 (2.0)            | 2.4 (1.8)            |
| A Overall length                                     |                     | ft (mm)  | 24.2 (7,380)         | 24.2 (7,370)         | 25.7 (7,840)         |
| B Overall height                                     |                     | ft (mm)  |                      | 10.7 (3,265)         |                      |
| C Width over tires                                   |                     | ft (mm)  |                      | 8.2 (2,490)          |                      |
| D Wheel base   |                     | ft (mm)  |                      | 9.8 (3,000)          |                      |
| E Ground clearance                                   |                     | in (mm)  |                      | 16.9 (430)           |                      |
| F Tread  |                     | ft (mm)  |                      | 6.3 (1,930)          |                      |
| G Bucket width                                       |                     | ft (mm)  |                      | 8.4 (2,560)          |                      |
| H Turning radius (Centerline of outside tire)        |                     | ft (mm)  | 16.7 (5,085)         | 17.6 (5,355)         | 17.6 (5,355)         |
| H' Loader clearance circle, bucket in carry position |                     | ft (mm)  | 19.5 (5,940)         | 19.5 (5,950)         | 20.0 (6,100)         |
| I Overall operating height                           |                     | ft (mm)  | 16.6 (5,050)         | 16.9 (5,150)         | 17.8 (5,420)         |
| J Carry Height of bucket pin                         |                     | ft (mm)  | 1.7 (515)            | 1.7 (515)            | 1.7 (515)            |
| K Height to bucket hinge pin, fully raised           |                     | ft (mm)  | 12.6 (3,835)         | 12.6 (3,835)         | 13.8 (4,200)         |
| L Dumping clearance 45 degree, full height           |                     | ft (mm)  | 9.5 (2,890)          | 9.3 (2,830)          | 10.7 (3,255)         |
| M Reach, 45 degree dump, full height                 |                     | ft (mm)  | 3.2 (975)            | 3.4 (1,040)          | 3.8 (1,170)          |
| N Digging depth (Horizontal digging angle)           |                     | in (mm)  | 3.7 (95)             | 3.7 (95)             | 11.0 (280)           |
| O Max. roll back at carry position                   |                     | deg      |                      | 50                   |                      |
| P Roll back angle at full height                     |                     | deg      | 55                   | 55                   | 50                   |
| Static tipping load *                                | Straight            | lb (kg)  | 20,330 (9,220)       | 19,970 (9,060)       | 16,230 (7,360)       |
|  | Full 40 degree turn | lb (kg)  | 17,610 (7,990)       | 17,310 (7,850)       | 14,000 (6,350)       |
| Breakout force                                       |                     | lb (kgf) | 24,054 (10,910)      | 22,031 (10,446)      | 23,380 (10,604)      |
|  |                     | kN       | 107                  | 98                   | 104                  |
| Operating weight *                                   |                     | lb (kg)  | 25,640 (11,630)      | 25,790 (11,700)      | 26,150 (11,860)      |

Note: All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7137:2009 and ISO 7546:1983

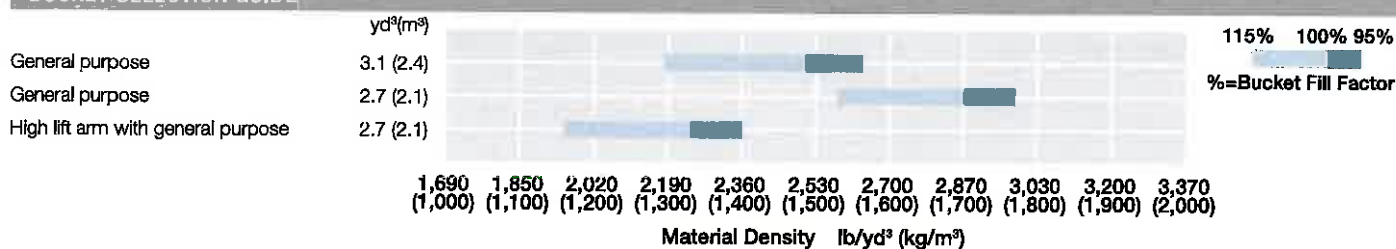
\*: Static tipping load and operating weight marked with\* include 20.5R25 (L3) tires (No ballast) with lubricants, full fuel tank and operator.

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

WEIGHT & SPECIFICATION CHANGES

| Option item |                   | Operating weight<br>lb (kg) | Tipping load lb (kg) |             | Overall width in (mm)<br>(outside tire) | Overall height<br>in (mm) | Overall length<br>in (mm) |
|-------------|-------------------|-----------------------------|----------------------|-------------|---|---------------------------|---------------------------|
|             |                   |                             | Straight             | Full turn   |   |                           |                           |
| Tire        | 17.5-25-12PR (L2) | -1,230 (-560)               | -440 (-200)          | -400 (-180) | -3.7 (-95)                              | -3.0 (-75)                | 2.4 (+60)                 |
|             | 17.5-25-12PR (L3) | -1,040 (-470)               | -220 (-100)          | -260 (-120) | -3.7 (-95)                              | -3.0 (-75)                | 2.4 (+60)                 |
|             | 20.5R25 (L3)      | ±0                          | ±0                   | ±0          | ±0                                      | ±0                        | ±0                        |
| Belly guard |                   | +150 (70)                   | +70 (30)             | +90 (40)    | ±0                                      | ±0                        | ±0                        |

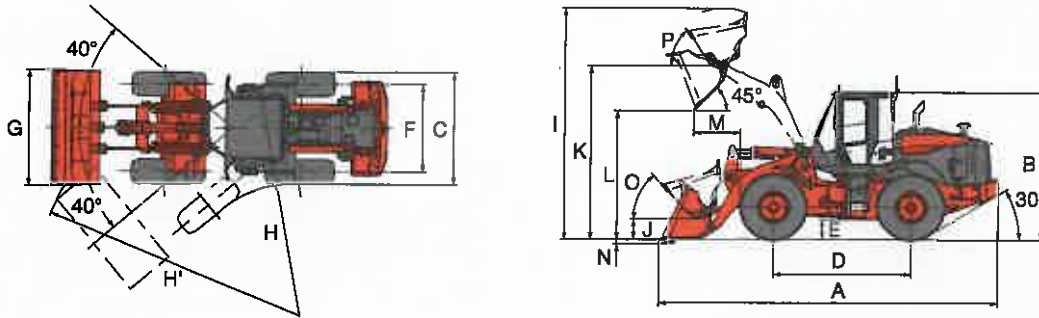
BUCKET SELECTION GUIDE



# SPECIFICATIONS

ZW150-6

## DIMENSIONS & SPECIFICATIONS



| Bucket type  |                     |                                   | Standard arm         |                      | High lift arm        |
|--|---------------------|-----------------------------------|----------------------|----------------------|----------------------|
|  |                     |                                   | General purpose      | General purpose      | General purpose      |
|  |                     |                                   | Bolt-on cutting edge | Bolt-on cutting edge | Bolt-on cutting edge |
| Bucket capacity                                      | ISO heaped          | yd <sup>3</sup> (m <sup>3</sup> ) | 3.1 (2.4)            | 3.5 (2.7)            | 3.1 (2.4)            |
|  | ISO struck          | yd <sup>3</sup> (m <sup>3</sup> ) | 2.6 (2.0)            | 2.9 (2.2)            | 2.6 (2.0)            |
| A Overall length                                     |                     | ft (mm)                           | 24.7 (7,530)         | 24.7 (7,540)         | 26.0 (7,935)         |
| B Overall height                                     |                     | ft (mm)                           |                      | 10.7 (3,265)         |                      |
| C Width over tires                                   |                     | ft (mm)                           | 8.2 (2,490)          | 8.1 (2,465)          | 8.2 (2,490)          |
| D Wheel base   |                     | ft (mm)                           |                      | 9.8 (3,000)          |                      |
| E Ground clearance                                   |                     | in (mm)                           |                      | 16.9 (430)           |                      |
| F Tread  |                     | ft (mm)                           |                      | 76.0 (1,930)         |                      |
| G Bucket width                                       |                     | ft (mm)                           |                      | 8.4 (2,560)          |                      |
| H Turning radius (Centerline of outside tire)        |                     | ft (mm)                           | 19.5 (5,955)         | 16.7 (5,085)         | 17.6 (5,355)         |
| H' Loader clearance circle, bucket in carry position |                     | ft (mm)                           | 16.7 (5,085)         | 16.7 (5,085)         | 16.7 (5,085)         |
| I Overall operating height                           |                     | ft (mm)                           | 17.03 (5,190)        | 17.15 (5,230)        | 18.2 (5,555)         |
| J Carry Height of bucket pin                         |                     | ft (mm)                           |                      | 1.2 (360)            |                      |
| K Height to bucket hinge pin, fully raised           |                     | ft (mm)                           | 12.6 (3,835)         | 12.6 (3,835)         | 13.8 (4,200)         |
| L Dumping clearance 45 degree, full height           |                     | ft (mm)                           | 9.3 (2,830)          | 8.9 (2,720)          | 10.5 (3,205)         |
| M Reach, 45 degree dump, full height                 |                     | ft (mm)                           | 3.4 (1,040)          | 3.4 (1,025)          | 4.0 (1,220)          |
| N Digging depth (Horizontal digging angle)           |                     | in (mm)                           | 3.7 (95)             | 3.7 (95)             | 11.0 (280)           |
| O Max. roll back at carry position                   |                     | deg                               |                      | 50                   |                      |
| P Roll back angle at full height                     |                     | deg                               | 57                   | 57                   | 52                   |
| Static tipping load *                                | Straight            | lb (kg)                           | 23,020 (10,440)      | 20,233 (9,178)       | 18,250 (8,280)       |
|  | Full 40 degree turn | lb (kg)                           | 20,000 (9,070)       | 22,708 (10,300)      | 15,760 (7,150)       |
| Breakout force                                       |                     | lb (kgf)                          | 22,031 (10,446)      | 19,709 (8,940)       | 21,356 (9,686)       |
|  |                     | kN                                | 98                   | 90                   | 95                   |
| Operating weight *                                   |                     | lb (kg)                           | 27,010 (12,250)      | 39.7 (12,110)        | 27,540 (12,490)      |

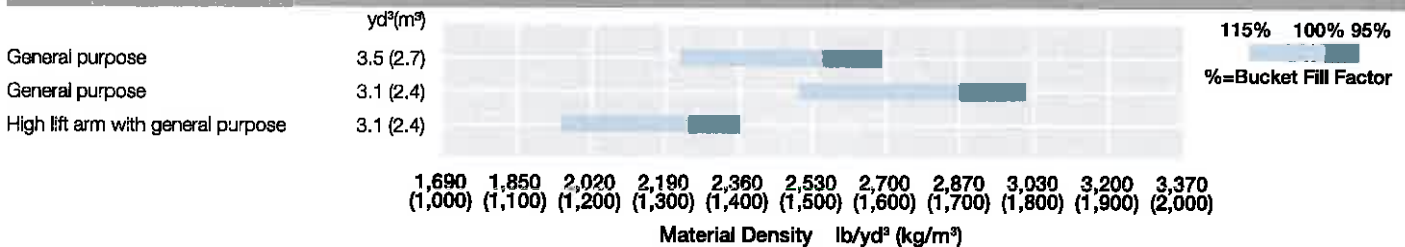
Note: All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7137:2009 and ISO 7546:1983

\*: Static tipping load and operating weight marked with \* include 20.5R25 (L3) tires (No ballast) with lubricants, full fuel tank and operator. Machine stability and operating weight depend on counterweight, tire size and other attachments.

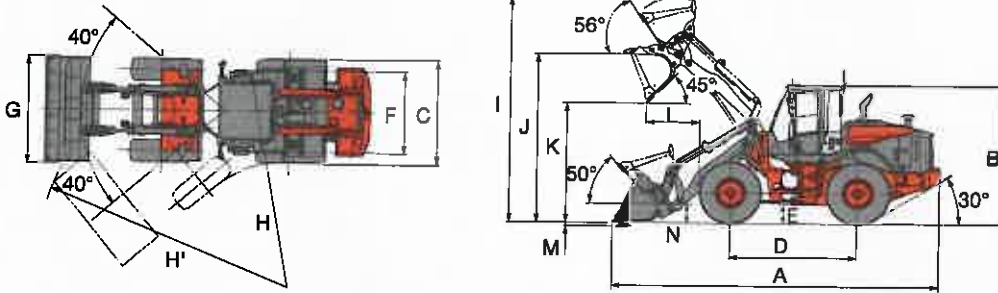
## WEIGHT & SPECIFICATION CHANGES

| Option item | Operating weight<br>lb (kg) | Tipping load kg (lb) |             | Overall width mm (in)<br>(outside tire) | Overall height<br>mm (in) | Overall length<br>mm (in) |
|-------------|-----------------------------|----------------------|-------------|---|---------------------------|---------------------------|
|             |                             | Straight             | Full turn   |   |                           |                           |
| Tire        | 20.5-25-12PR (L2)           | -400 (-180)          | -240 (-110) | -260 (-120)                             | ±0                        | ±0                        |
|             | 20.5-25-12PR (L3)           | -400 (-180)          | -240 (-110) | -260 (-120)                             | ±0                        | ±0                        |
|             | 20.5R25 (L3)                | ±0                   | ±0          | ±0                                      | ±0                        | ±0                        |
| Belly guard | +150 (70)                   | +70 (30)             | +90 (40)    | ±0                                      | ±0                        | ±0                        |

## BUCKET SELECTION GUIDE

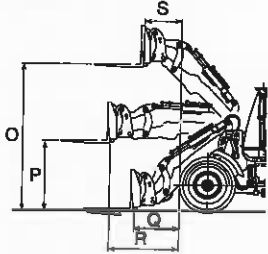


DIMENSIONS & SPECIFICATIONS



| Bucket type  |                     |           | General purpose      |                         |
|--|---------------------|-----------|----------------------|-------------------------|
|  |                     |           | Bolt-on cutting edge | Weld-on adaptor & teeth |
| Bucket capacity                                      | ISO heaped          | yd³ (m³)  | 2.7 (2.1)            | 2.6 (2.0)               |
|  | ISO struck          | yd³ (m³)  | 2.2 (1.7)            | 2.2 (1.7)               |
| A Overall length                                     |                     | ft (mm)   | 25.8 (7,875)         | 26.1 (7,980)            |
| B Overall height                                     |                     | ft (mm)   |                      | 10.7 (3,265)            |
| C Width over tires                                   |                     | ft (mm)   |                      | 8.2 (2,490)             |
| D Wheel base   |                     | ft (mm)   |                      | 9.8 (3,000)             |
| E Ground clearance                                   |                     | in (mm)   |                      | 16.9 (430)              |
| F Tread  |                     | ft (mm)   |                      | 6.3 (1,930)             |
| G Bucket width                                       |                     | ft (mm)   |                      | 8.3 (2,535)             |
| H Turning radius (Centerline of outside tire)        |                     | ft (mm)   |                      | 16.7 (5,085)            |
| H' Loader clearance circle, bucket in carry position |                     | ft (mm)   | 19.6 (5,980)         | 19.8 (6,030)            |
| I Overall operating height                           |                     | ft (mm)   |                      | 17.4 (5,290)            |
| J Height to bucket hinge pin, fully raised           |                     | ft (mm)   |                      | 13.1 (3,980)            |
| K Dumping clearance 45 degree, full height           |                     | ft (mm)   | 9.2 (2,800)          | 8.8 (2,680)             |
| L Reach, 45 degree dump, full height                 |                     | ft (mm)   | 4.1 (1,250)          | 4.5 (1,380)             |
| M Digging depth (Horizontal digging angle)           |                     | in (mm)   | 4.3 (110)            | 3.9 (100)               |
| N Carry height of bucket pin                         |                     | in (mm)   |                      | 20.7 (525)              |
| Bucket weight  |                     | lb (kg)   | 2,840 (1,290)        | 2,730 (1,240)           |
| Static tipping load *                                | Straight            | lb (kg)   | 19,820 (8,990)       | 19,910 (9,030)          |
|  | Full 40 degree turn | lb (kg)   | 17,110 (7,760)       | 17,200 (7,800)          |
| Breakout force                                       |                     | lbf (kgf) | 24,030 (10,900)      | 21,080 (9,560)          |
|  |                     | kN        | 106.9                | 93.7                    |
| Operating weight *                                   |                     | lb (kg)   | 28,890 (13,100)      | 28,780 (13,050)         |

WITH FORK ATTACHMENT



| Attachment type                   |                     | Fork            |
|-----------------------------------|---------------------|-----------------|
| O Max. stacking height            | ft (mm)             | 12.3 (3,740)    |
| P Height of fork at maximum reach | ft (mm)             | 5.9 (1,810)     |
| Q Reach at ground level           | ft (mm)             | 3.8 (1,170)     |
| R Max. reach                      | ft (mm)             | 5.9 (1,790)     |
| S Reach at max. stacking height   | ft (mm)             | 3.2 (990)       |
| Static tipping load               | Straight            | lbf (kgf)       |
|                                   | Full 40 degree turn | lbf (kgf)       |
| Max. payload per EN 474-3, 80 %   | lb (kg)             | 18,120 (8,220)  |
| Max. payload per EN 474-3, 60 %   | lb (kg)             | 15,720 (7,130)  |
| Fork tine length                  | ft (mm)             | 12,350 (5,600)  |
| Operating weight *                | lb (kg)             | 9,260 (4,200)   |
|                                   |                     | 4.0 (1,220)     |
|                                   |                     | 28,440 (12,900) |

Note: All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7137:1997, ISO 7546:1983 and ISO 8313:1989  
 \*: Static tipping load and operating weight marked with\* include 20.5R25 (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 & SPECIFICATION CHANGES

| Option item | Operating weight<br>lb (kg) | Tipping load lb (kg) |             | Overall width in (mm)<br>(outside tire) | Overall height<br>in (mm) | Overall length<br>in (mm) |
|-------------|-----------------------------|----------------------|-------------|---|---------------------------|---------------------------|
|             |                             | Straight             | Full turn   |   |                           |                           |
| Tire        | 20.5-25-12PR (L2)           | -400 (-180)          | -240 (-110) | -260 (-120)                             | ±0                        | ±0                        |
|             | 20.5-25-12PR (L3)           | -400 (-180)          | -240 (-110) | -260 (-120)                             | ±0                        | ±0                        |
|             | 20.5R25 (L3)                | ±0                   | ±0          | ±0                                      | ±0                        | ±0                        |
| Belly guard | +150 (70)                   | +70 (30)             | +90 (40)    | ±0                                      | ±0                        | ±0                        |

BUCKET SELECTION GUIDE

|                 | yd³ (m³)  | 115%                            | 100%          | 95%           |
|-----------------|-----------|---------------------------------|---------------|---------------|
| General purpose | 2.6 (2.0) |                                 |               |               |
| General purpose | 2.7 (2.1) |                                 |               |               |
|                 |           | 1,690 (1,000)                   | 1,850 (1,100) | 2,020 (1,200) |
|                 |           | 2,190 (1,300)                   | 2,360 (1,400) | 2,530 (1,500) |
|                 |           | 2,700 (1,600)                   | 2,870 (1,700) | 3,030 (1,800) |
|                 |           | 3,200 (1,900)                   | 3,370 (2,000) |               |
|                 |           | Material Density lb/yd³ (kg/m³) |               |               |



### STANDARD EQUIPMENT

#### ENGINE

|                                       |
|---------------------------------------|
| Air cleaner, double element           |
| Auto idle shut down                   |
| Cold start (air intake heater)        |
| Cooling fan, automatic reversible     |
| Cummins QSB4.5                        |
| EGR system                            |
| Fuel filter (main), w/water separator |
| Fuel pre-filter, w/water separator    |
| SCR system and DOC                    |
| VGT (Variable Geometry Turbocharger)  |
| Work mode selector                    |

#### POWERTRAIN

|   |
|---|
| Brakes, service   |
| Enclosed wet disc   |
| Dual system   |
| Inboard mounted   |
| Brake, parking  |
| Spring applied  |
| Oil pressure released   |
| Wet disc type   |
| Coolers, wide fin   |
| Differential, limited slip (F/R)                                    |
| Drive shafts, low maintenance                                       |
| F-R direction selector (2-column mounted/HYD-control lever mounted) |
| Hydrostatic transmission  |
| Inching pedal   |
| Maximum speed adjuster for 1st speed                                |
| Traction control  |
| Universal joints, sealed  |

#### HYDRAULIC SYSTEM

|   |
|---|
| Boom kick-out, dual (operator adjustable in cab)                          |
| Bucket positioner   |
| Control lever, single, pilot-assisted w/1 aux lever for 3rd spool control |
| Control lever lock (electric)   |
| Control valve, 3-spool, parallel and tandem control                       |
| <b>Pump, gear, fixed displacement</b>                                     |
| Quick coupler control lines and controls                                  |
| Ride control w/1 oad sensing valve and automatic shut-off                 |
| Steering, orbital   |

#### ELECTRICAL

|                                     |
|-------------------------------------|
| 24-volt electrical system           |
| Back-up alarm                       |
| Batteries (2), 12V, 565 CCA         |
| Battery disconnect switch           |
| Converter, 12V/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, 12V,  |
| Adjustable armrest/console, (fore/aft sliding)  |
| Air conditioner/heater/pressurizer  |
| AM/FM/WB radio with AUX input   |
| Ashtray   |
| Cab dome lamps (2)  |
| Cigarette lighter   |
| Coat hook   |
| Cooler box storage area   |
| Cup holder (2)  |
| Floor mat   |
| Retractable seat belt (3 inch)  |
| ROPS/FOPS certified   |
| Seat, air suspension, fabric  |
| Steering column, telescoping and tilting w/quick-release pedal  |
| Storage box (heated/cooled)   |
| Sun visor   |

#### OTHERS

|  |
|--|
| Articulation locking bar   |
| Counterweight  |
| Drawbar  |
| Fenders, front, w/mudflap  |
| Fenders, rear, deck-type, 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, steel  |
| Steps, rear  |
| Vandalism protection   |
| Z-bar loader linkage   |

#### ALARMS, GAUGES, INDICATORS

|                           |                                     |
|---------------------------|-------------------------------------|
| Alarms (visual & audible) | Air cleaner element                 |
|                           | Aftertreatment device               |
|                           | Brake oil low pressure              |
|                           | Engine oil low pressure             |
|                           | Emergency steering alarm            |
|                           | Engine trouble                      |
|                           | Engine warning                      |
|                           | Fuel filter (water in fuel)         |
|                           | Hydraulic oil level                 |
|                           | Hydraulic oil temperature           |
|                           | Overheat (engine coolant)           |
|                           | Steering oil low pressure           |
| Gauges                    | DEF/AdBlue® Level                   |
|                           | Engine coolant temperature          |
|                           | Fuel gauge                          |
|                           | Speedometer                         |
| Indicators                | Air conditioner display             |
|                           | Cold start                          |
|                           | Control lever lock                  |
|                           | Eco-operating status                |
|                           | Engine warning                      |
|                           | Fan reverse rotation                |
|                           | F-N-R selection                     |
|                           | F-N-R switch enable                 |
|                           | Fuel filter (plugged filter)        |
|                           | Fuel filter (water in fuel)         |
|                           | High beam                           |
|                           | HST oil temperature                 |
|                           | HST warning                         |
|                           | Low fuel level                      |
|                           | Maintenance                         |
|                           | Operating mode (Normal, Power)      |
|                           | Parking brake                       |
|                           | Ride control                        |
|                           | Time/operating hour/ODO             |
|                           | Traction control switch             |
|                           | Turn signal w/4-way flashers/marker |
|                           | Work light                          |

#### OPTIONAL EQUIPMENT

|   |
|---|
| Belly guard, front chassis, transmission (rear) |
| Bolt-on cutting edge & segments                 |
| Bucket teeth                                    |
| Camera, rear view                               |
| Cooling system cores, narrow fin                |
| Dual lever hydraulic control                    |
| Fenders, rear, full, w/mudflap                  |
| HID work lights                                 |
| High lift boom arm                              |
| LED work lights                                 |
| Pre-cleaner (turbine type)                      |
| Quick coupler & attachments                     |
| Quick coupler, ISO                              |
| Seat, heated                                    |

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

**STANDARD EQUIPMENT**

**ENGINE**

- \_\_\_\_\_ Air cleaner, double element
- \_\_\_\_\_ Auto idle shut down
- \_\_\_\_\_ Cold start (glow plug)
- \_\_\_\_\_ Cooling fan, automatic reversible
- \_\_\_\_\_ Cummins QSB4.5 diesel engine
- \_\_\_\_\_ EGR system
- \_\_\_\_\_ Fuel filter (main), w/water separator
- \_\_\_\_\_ Fuel pre-filter, w/water separator
- \_\_\_\_\_ SCR catalyst and DOC
- \_\_\_\_\_ VGT (Variable Geometry Turbocharger)
- \_\_\_\_\_ Work mode selector

**POWERTRAIN**

- \_\_\_\_\_ Brakes, service
  - \_\_\_\_\_ Enclosed wet disc
  - \_\_\_\_\_ Dual system
  - \_\_\_\_\_ Inboard mounted
- \_\_\_\_\_ Brake, parking
  - \_\_\_\_\_ Spring applied
  - \_\_\_\_\_ Oil pressure released
  - \_\_\_\_\_ Wet disc type
- \_\_\_\_\_ Cooling system cores, wide-fin
- \_\_\_\_\_ Differential, limited slip (F/R)
- \_\_\_\_\_ Drive shafts, low maintenance
- \_\_\_\_\_ F-R direction selector (2-column mounted/HYD-control lever mounted)
- \_\_\_\_\_ Hydrostatic transmission
- \_\_\_\_\_ Inching pedal
- \_\_\_\_\_ Maximum speed adjuster for 1st speed
- \_\_\_\_\_ Traction control
- \_\_\_\_\_ Universal joints, sealed

**HYDRAULIC SYSTEM**

- \_\_\_\_\_ Boom kick-out, dual (operator adjustable in cab)
- \_\_\_\_\_ Bucket positioner
- \_\_\_\_\_ Quick coupler control lines and controls
- \_\_\_\_\_ Control Lever, single, pilot-assisted w/1 aux Lever for 3rd spool control
- \_\_\_\_\_ Control lever lock (electric)
- \_\_\_\_\_ Control valve, 3-spool, parallel control
- \_\_\_\_\_ Pump, gear, fixed displacement
- \_\_\_\_\_ Quick coupler control lines and controls
- \_\_\_\_\_ Ride control w/load sensing valve and automatic shut-off
- \_\_\_\_\_ Steering, orbital

**ELECTRICAL**

- \_\_\_\_\_ 24-volt electrical system
- \_\_\_\_\_ Back-up alarm
- \_\_\_\_\_ Batteries (2), 12V, 565 CCA
- \_\_\_\_\_ Battery disconnect switch
- \_\_\_\_\_ Converter, 12V/15 Amp
- \_\_\_\_\_ Horn, dual electric
- \_\_\_\_\_ Instrument panel, LCD, monochrome
- \_\_\_\_\_ 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, 12V
- \_\_\_\_\_ Adjustable armrest/console, (fore/aft sliding)
- \_\_\_\_\_ Air conditioner/heater/pressurizer
- \_\_\_\_\_ AM/FM/WB radio with AUX input
- \_\_\_\_\_ Ashtray
- \_\_\_\_\_ Cab dome lamps (2)
- \_\_\_\_\_ Cigarette lighter
- \_\_\_\_\_ Coat hook
- \_\_\_\_\_ Cooler box storage area
- \_\_\_\_\_ Cup holder (2)
- \_\_\_\_\_ Floormat
- \_\_\_\_\_ Retractable seat belt (3 inch)
- \_\_\_\_\_ ROPS/FOPS certified
- \_\_\_\_\_ Seat, air suspension, fabric
- \_\_\_\_\_ Steering column, telescoping and tilting w/quick-release pedal
- \_\_\_\_\_ Storage box (heated/cooled)
- \_\_\_\_\_ Sun visor

**OTHERS**

- \_\_\_\_\_ Articulation locking bar
- \_\_\_\_\_ Counterweight
- \_\_\_\_\_ Drawbar
- \_\_\_\_\_ Fenders, front, w/mudflap
- \_\_\_\_\_ Fenders, rear, deck-type, 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, steel
- \_\_\_\_\_ Steps, rear
- \_\_\_\_\_ Vandalism protection
- \_\_\_\_\_ Z-bar loader linkage

**ALARMS, GAUGES, INDICATORS**

- \_\_\_\_\_ Alarms (visual & audible)
  - \_\_\_\_\_ Brake oil low pressure
  - \_\_\_\_\_ Engine oil low pressure
  - \_\_\_\_\_ Hydraulic oil level
  - \_\_\_\_\_ Overheat (engine coolant)
  - \_\_\_\_\_ Steering oil low pressure
- \_\_\_\_\_ Gauges
  - \_\_\_\_\_ DEF/AdBlue® Level
  - \_\_\_\_\_ Engine coolant temperature
  - \_\_\_\_\_ Fuel gauge
  - \_\_\_\_\_ HST oil temperature
- \_\_\_\_\_ Indicators
  - \_\_\_\_\_ Aftertreatment Device
  - \_\_\_\_\_ Air cleaner element
  - \_\_\_\_\_ Air conditioner display
  - \_\_\_\_\_ Battery discharge warning
  - \_\_\_\_\_ Cold start
  - \_\_\_\_\_ Control lever lock
  - \_\_\_\_\_ Eco-operating status
  - \_\_\_\_\_ Emergency steering
  - \_\_\_\_\_ Engine warning
  - \_\_\_\_\_ Fan reverse rotation
  - \_\_\_\_\_ F-N-R selection
  - \_\_\_\_\_ F-N-R switch enable
  - \_\_\_\_\_ Fuel filter (plugged filter)
  - \_\_\_\_\_ Fuel filter (water in fuel)
  - \_\_\_\_\_ High beam
  - \_\_\_\_\_ HST oil temperature
  - \_\_\_\_\_ HST warning
  - \_\_\_\_\_ Maintenance
  - \_\_\_\_\_ Operating mode (Normal, Power)
  - \_\_\_\_\_ Parking brake
  - \_\_\_\_\_ Ride control
  - \_\_\_\_\_ Service
  - \_\_\_\_\_ Speedometer
  - \_\_\_\_\_ Time/operating hour/ODO
  - \_\_\_\_\_ Traction control switch
  - \_\_\_\_\_ Turn signal w/4-way flashers/marker
  - \_\_\_\_\_ Work light

**OPTIONAL EQUIPMENT**

- \_\_\_\_\_ Belly guard, front chassis, transmission (rear)
- \_\_\_\_\_ Bolt-on cutting edge & segments
- \_\_\_\_\_ Bucket teeth
- \_\_\_\_\_ Camera, rear view
- \_\_\_\_\_ Dual lever hydraulic control
- \_\_\_\_\_ Fenders, rear, full, w/mudflap
- \_\_\_\_\_ HID work lights
- \_\_\_\_\_ High lift boom arm
- \_\_\_\_\_ LED work lights
- \_\_\_\_\_ Pre-cleaner (turbine type)
- \_\_\_\_\_ Quick coupler & attachments
- \_\_\_\_\_ Quick coupler, ISO

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

### STANDARD EQUIPMENT

#### ENGINE

Air cleaner, double element  
 Auto idle shut down  
 Cold start (glow plug)  
 Cooling fan, automatic reversible  
 Cummins QSB4.5  
 EGR system  
 Fuel filter (main), w/water separator  
 Fuel pre-filter, w/water separator  
 SCR system  
 VGT (Variable Geometry Turbocharger)  
 Work mode selector

#### POWERTRAIN

Brakes, service  
 Enclosed wet disc  
 Dual system  
 Inboard mounted  
 Brake, parking  
 Spring applied  
 Oil pressure released  
 Wet disc type  
 Coolers, wide fin spacing  
 Differential, limited slip (F/R)  
 Drive shafts, low maintenance  
 F-R direction selector (2-column mounted/HYD-control lever mounted)  
 Hydrostatic transmission  
 Inching pedal  
 Maximum speed adjuster for 1st speed  
 Traction control  
 Universal joints, sealed

#### HYDRAULIC SYSTEM

Boom kick-out, dual (operator adjustable in cab)  
 Bucket positioner  
 Control Lever, single, pilot-assisted w/1 aux lever for 3rd spool control  
 Control lever lock (electric)  
 Control valve, 3-spool, parallel control  
 Pump, gear, fixed displacement  
 Quick Coupler Control Lines and Controls  
 Ride Control w/Load sensing valve and automatic shut-off  
 Steering, orbitrol

#### ELECTRICAL

24-volt electrical system  
 Back-up alarm  
 Batteries (2), 12V, 565 CCA  
 Battery disconnect switch  
 Converter, 12V/15 Amp  
 Horn, dual electric  
 Instrument panel, LCD, monochrome  
 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, 12V,  
 Adjustable armrest/console, (fore/aft sliding)  
 Air conditioner/heater/pressurizer  
 AM/FM/WB radio with AUX input  
 Ashtray  
 Cab dome lamps (2)  
 Cigarette lighter  
 Coat hook  
 Cooler box storage area  
 Cup holder (2)  
 Floor mat  
 Retractable seat belt (3 inch)  
 ROPS/FOPS certified  
 Seat, air suspension, fabric  
 Steering column, telescoping and tilting w/quick-release pedal  
 Storage box (heated/cooled)  
 Sun visor

#### OTHERS

Articulation locking bar  
 Counterweight  
 Drawbar  
 Fenders, front, w/mudflap  
 Fenders, rear, deck-type, w/mudflap  
 Global e-Service, telematic monitoring system (GSM-version w/4 yrs. service)  
 Ladders, inclined  
 Lifting eyes  
 Linkage, parallel, sealed  
 Linkage pins, HN bushing  
 Neutral safety start  
 Rear grill, steel  
 Steps, rear  
 Vandalism protection  
 Quick coupler

#### ALARMS, GAUGES, INDICATORS

**Alarms (visual & audible)**  
 Brake oil low pressure  
 Engine oil low pressure  
 Hydraulic oil level  
 Overheat (engine coolant)  
 Steering oil low pressure

**Gauges**  
 DEF/AdBlue® Level  
 Engine coolant temperature  
 Fuel gauge  
 HST oil temperature

**Indicators**  
 Aftertreatment device  
 Air cleaner element  
 Air conditioner display  
 Battery discharge warning  
 Cold start  
 Control lever lock  
 Eco-operating status  
 Emergency steering  
 Engine warning  
 Fan reverse rotation  
 F-N-R selection  
 F-N-R switch enable  
 Fuel filter (plugged filter)  
 Fuel filter (water in fuel)  
 High beam  
 HST oil temperature  
 HST warning  
 Maintenance  
 Operating mode (Normal, Power)  
 Parking brake  
 Service  
 Speedometer  
 Time/operating hour/ODO  
 Traction control switch  
 Turn signal w/4-way flashers/marker  
 Work light

#### OPTIONAL EQUIPMENT

Belly guard, front chassis, transmission (rear)  
 Bolt-on cutting edge & segments  
 Camera, rear view  
 Dual lever hydraulic control  
 Fenders, rear, full, w/mudflap  
 HID work lights  
 LED work lights  
 Pre-cleaner (turbine type)  
 Seat, heated

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

MEMO

\*As per addendum, Hitachi will warranty the differentials / axels for a period of 5 year / unlimited hours per request of West Virginia Department of Highways.

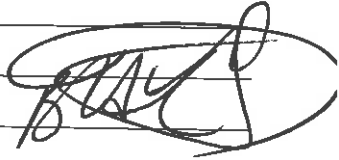
DUSTIN HOOGVEEN

HITACHI REGIONAL BUSINESS MANAGER

BRIAN HAHN

GM WV, ANDERSON COMPANY

7/25/19



# HITACHI

## Reliable solutions

Hitachi Construction Machinery Co., Ltd. (Hitachi Construction Machinery) was established in 1970, when Hitachi, Ltd. spun off its Construction Machinery Division. Currently, there are 84 companies that comprise the Hitachi Construction Machinery Group providing Reliable solutions for customers in the heavy construction equipment industry. Hitachi Construction Machinery continues to grow as a strong, global, competitive enterprise.

Fast forward to 2010. A joint venture with Hitachi Construction Machinery and Kawasaki Heavy Industries was entered into to further develop the global scope of the wheel loader product line. This relationship combined the huge technological and manufacturing resources of Kawasaki Heavy Industries and Hitachi Construction Machinery Group. This effort has resulted in a very productive, reliable, and cost-effective product.

In 2016 Hitachi Construction Machinery bought 100% of KCM Corporation's stock transitioning to KCMA Corporation. In 2018 Hitachi Construction Machinery took the reins transitioning KCMA Corporation to Hitachi Construction Machinery Loaders America Inc., furthering their commitment to the North American market by introducing the Hitachi brand wheel loader line, offering outstanding parts availability, an unmatched factory component exchange program, customer and dealer training programs, and a wide range of services and programs.

With manufacturing facilities in Banshu, Japan; Ryugasaki, Japan; and Newnan, Ga., Hitachi Construction Machinery Loaders America has the experience and technology to design, engineer, manufacture, and service your next wheel loader. The Hitachi Construction Machinery Loaders America Inc. team is focused on wheel loaders. As a subsidiary of one of the largest construction machinery companies in the world, Hitachi Construction Machinery Loaders America Inc. is securely poised as your go-to source in the North American wheel loader market.



## A FULL LINE OF WHEEL LOADERS

- 13 Models
- 30 HP – 531 HP

## REPUTATIONS ARE BUILT ON IT

Prior to operating this machine, including satellite communication system, in a country other than a country of its intended use, it may be necessary to make modifications to it so that it complies with the local regulatory standards (including safety standards) and legal requirements of that particular country. Please do not export or operate this machine outside the country of its intended use until such compliance has been confirmed. Please contact your Hitachi dealer in case of questions about compliance.

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

Hitachi Construction Machinery Loaders America Inc.  
[www.hitachim.com](http://www.hitachim.com)

KL-EN142NA-USP

05/2019

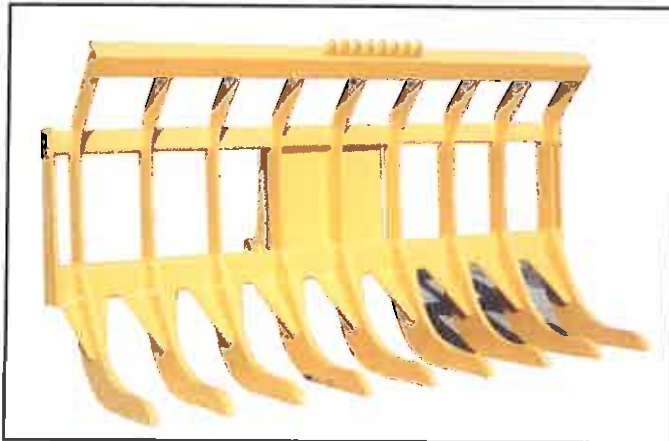
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# LR LOADER RAKES

MAXIMUM CLEARING EFFICIENCY

## LOADERS REALLY PAY OFF ON CLEARING JOBS



**LR**



**LR-C**

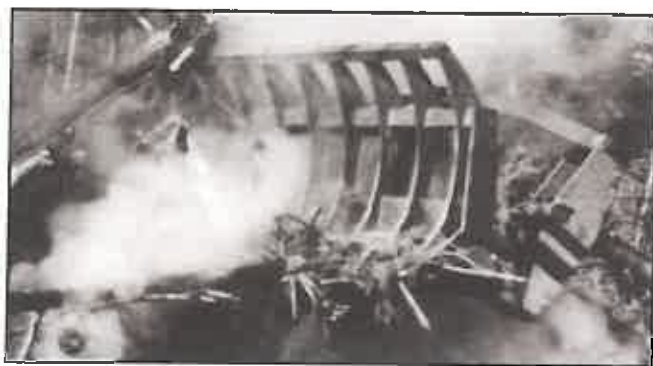
### EFFICIENT

Equip your loader with a Rockland LR Loader Rake to take full advantage of the loader's speed, reach and lift. Loaders turn into efficient land clearing machines when equipped with a Rockland LR Loader Rake. When the rake is raised and tilted forward, great leverage can be exerted high on the tree trunk to tip the tree and expose the roots. Stumps can now be dug and loaded with the same machine. Windrows can be built bigger and higher for more complete burning. Cleanup time is drastically reduced.

The LR Loader Rake's long, tough teeth are built of certified high strength, heat-treated alloy steel for years of heavy-duty land clearing service. They are curved for maximum rolling and sifting action, and they project forward of the frame far enough so that loading land clearing debris is fast and efficient. The dig and raking angle are controlled by the loader's bucket rollback cylinders so that operating angle and depth are infinitely adjustable for maximum productivity. At the center of the brush guard is a tree push bar with teeth to keep trees centered when pushing them over. Hydraulically operated clamps are optional on all LR Loader Rakes. They provide positive load control and increase load capacity. Increase land clearing efficiency by demanding a Rockland LR Loader Rake on your next clearing job.

### RUGGED

From the high strength, heat-treated alloy steel teeth through the mainframe and attaching brackets, the LR rake reflects design excellence and manufacturing quality. The teeth are designed specifically for land clearing. They dig deep and are tough enough to absorb all the abuse created by clearing land. Rockland LR rakes deliver years of dependable trouble-free performance.



## Higher Windrows = Better Burns

Hotter fires are created by higher windrows. Bigger windrows burn better and cleaner. The reach and speed of a loader equipped with a Rockland LR Loader Rake really pays off stacking and piling. Whether it be clearing and burning, or clearing and loading, you need a Rockland LR Loader Rake to turn your loader into an efficient land clearing machine.

### SPECIFICATIONS

| WHEEL LOADERS | Machine Category          | 5                          | 10                          | 20                          | 30                          | 40                          | 50                          | 60                          | 70                          |
|---------------|---------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|               | Raking Width (")          | 79<br><small>2007</small>  | 90<br><small>2286</small>   | 96<br><small>2438</small>   | 106<br><small>2692</small>  | 110<br><small>2794</small>  | 118<br><small>2997</small>  | 129<br><small>3277</small>  | 139<br><small>3531</small>  |
|               | Number of Teeth           | 7                          | 8                           | 8                           | 8                           | 8                           | 8                           | 9                           | 9                           |
|               | Tooth Clear Spacing (")   | 12<br><small>305</small>   | 11<br><small>297</small>    | 12<br><small>305</small>    | 13.5<br><small>343</small>  | 14<br><small>356</small>    | 14.5<br><small>368</small>  | 13<br><small>330</small>    | 14<br><small>356</small>    |
|               | Tooth Penetration (")     | 12<br><small>305</small>   | 16<br><small>406</small>    | 16<br><small>406</small>    | 16<br><small>406</small>    | 16<br><small>406</small>    | 20<br><small>508</small>    | 20<br><small>508</small>    | 20<br><small>508</small>    |
|               | Height (")                | 52<br><small>1321</small>  | 56<br><small>1422</small>   | 57<br><small>1448</small>   | 57<br><small>1448</small>   | 57<br><small>1448</small>   | 66<br><small>1676</small>   | 66<br><small>1676</small>   | 71<br><small>1803</small>   |
|               | Weight (lbs.)             | 1000<br><small>454</small> | 1450<br><small>658</small>  | 2150<br><small>976</small>  | 2475<br><small>1123</small> | 2675<br><small>1213</small> | 3800<br><small>1724</small> | 4975<br><small>2259</small> | 6650<br><small>3019</small> |
|               | Weight with Clamps (lbs.) | 1820<br><small>720</small> | 2285<br><small>1030</small> | 3255<br><small>1465</small> | 4300<br><small>1935</small> | 4345<br><small>1955</small> | 5775<br><small>2600</small> | 6270<br><small>2820</small> | 8880<br><small>3428</small> |

(mm/kg)

Specifications subject to change without notice.

| CRAWLER LOADERS | Machine Category          | 5                           | 10                          | 20                          | 30                          | 40                          | 50                          | 60                          | 70                          |
|-----------------|---------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|                 | Raking Width (")          | 67<br><small>1702</small>   | 82<br><small>2083</small>   | 88<br><small>2235</small>   | 94<br><small>2386</small>   | 94<br><small>2388</small>   | 108<br><small>2743</small>  | 115<br><small>2921</small>  | 116<br><small>2946</small>  |
|                 | Number of Teeth           | 6                           | 7                           | 7                           | 8                           | 8                           | 8                           | 8                           | 8                           |
|                 | Tooth Clear Spacing (")   | 12.25<br><small>311</small> | 12.25<br><small>311</small> | 13<br><small>330</small>    | 11.75<br><small>298</small> | 11.75<br><small>298</small> | 13<br><small>330</small>    | 13.5<br><small>343</small>  | 13<br><small>330</small>    |
|                 | Tooth Penetration (")     | 12<br><small>305</small>    | 16<br><small>406</small>    | 16<br><small>406</small>    | 16<br><small>406</small>    | 20<br><small>508</small>    | 20<br><small>508</small>    | 20<br><small>508</small>    | 20<br><small>508</small>    |
|                 | Height (")                | 52<br><small>1321</small>   | 56<br><small>1422</small>   | 57<br><small>1448</small>   | 57<br><small>1448</small>   | 66<br><small>1676</small>   | 66<br><small>1676</small>   | 66<br><small>1676</small>   | 71<br><small>1803</small>   |
|                 | Weight (lbs.)             | 880<br><small>400</small>   | 1320<br><small>599</small>  | 1920<br><small>872</small>  | 2210<br><small>1003</small> | 3385<br><small>1537</small> | 3915<br><small>1777</small> | 4515<br><small>2050</small> | 5930<br><small>2692</small> |
|                 | Weight with Clamps (lbs.) | 1480<br><small>672</small>  | 2235<br><small>1015</small> | 2600<br><small>1180</small> | 3485<br><small>1582</small> | 4700<br><small>2134</small> | 5465<br><small>2481</small> | 6630<br><small>3010</small> | 6830<br><small>3101</small> |

(mm/kg)

Specifications subject to change without notice.

### INSTALLATION INFORMATION

All Rockland LR rakes mount in place of the standard bucket using factory pins or specified coupler brackets. Rakes with clamps require a three-spool valve and boom arm piping to complete the installation.

### WARRANTY

Rockland Loader Rakes are guaranteed against failure due to defective design, materials or workmanship for a period of two years or 4000 hours.



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# LF LOG FORKS and GRAPPLES

VISIBILITY PLUS FEATURES  
EVERY LOG YARD NEEDS

## LF LOG FORKS AND GRAPPLES GET THE JOB DONE

**Visibility, reliability and capacity** – three important factors that combine to guarantee efficient log handling. Rockland LF Log Forks combine all three to deliver years of productive log handling. Here are the reasons a new LF Log Fork will complement the performance of your loader:

**VISIBILITY** - Smart operators know they can move more wood every shift if they can see what they are doing. Rockland LF Log Forks are designed for maximum visibility—the tine tips can be seen at ground level because of the low-profile frame. In addition, when the LF is equipped with a hydraulic clamp, the clamp supports and cylinders are located out of the operator's line of sight so they can see what they are doing—not watching the cylinders work while guessing where the tines are!

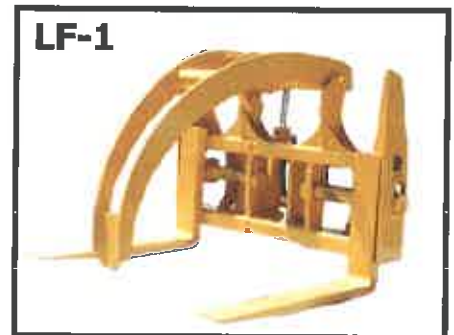
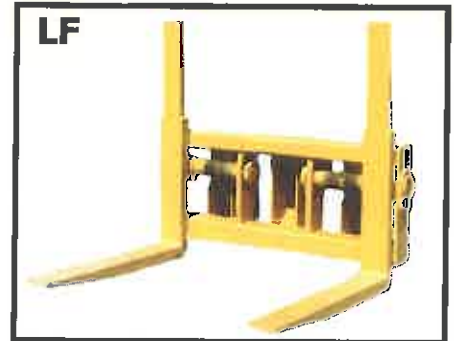
**RELIABILITY** – Rockland has been building log forks for over 30 years. These units reflect our years of experience and dedication to quality. They are truly designed to perform and built to last.

The high visibility open frames are manufactured from rugged, high-strength, rectangular alloy steel tubing. The heat-treated steel tines are forged from solid, high strength alloy plate. Rockland doesn't use cheap tines cut from plate and welded together at the heel. Never have. Never will.

Rockland hydraulics are first class. We use high pressure fittings and hose. There are cheaper fittings. Some people use them. We don't! Hydraulic cylinders are at the heart of any fork equipped with a clamp. Rockland cylinders feature oversize pins, induction hardened, heat treated, chrome-plated rods, and high temperature long life O-rings and seals. All this can be summed up in one word. Quality. We build our products to last and that's why knowledgeable yard operators have been specifying Rockland LF Log Forks for years!

**FEATURES AND OPTIONS** – LF Log Forks have the features every log yard needs. All LF's are equipped with adjustable floating tines that help compensate for uneven ground. Tine spacing is infinitely adjustable so you can set them to suit your operation. If you prefer fixed, non-floating adjustable tines, or der the float-lock option. If your operation demands a clamp for positive load control, choose either the LF-1 or LF-W. The LF-1 has a single clamp that provides positive load control with minimum weight and cost. LF-1's are available for both center bell crank and conventional boom arms. The LF-W has a wide dual cylinder clamp for maximum load control.

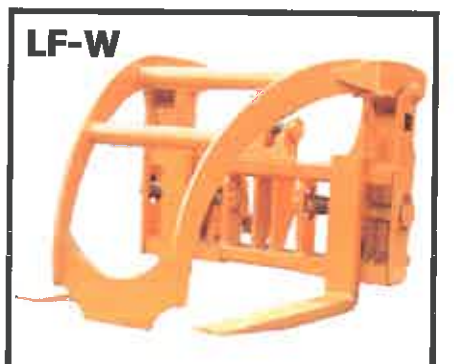
Yes, Rockland LF Log Forks are truly designed to perform and built to last. For maximum productivity and years of dependable service, equip your loader with a Rockland LF Log Fork.



For center bell crank machines



For conventional boom arms



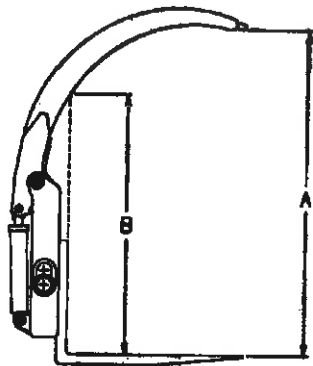


# LOG FORKS AND GRAPPLES SPECIFICATIONS

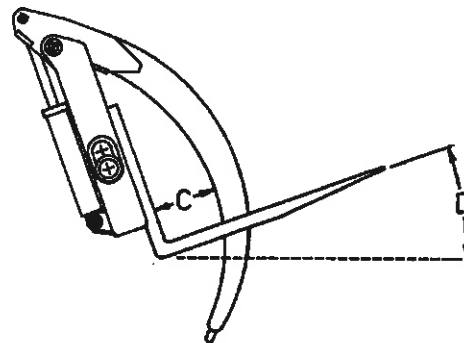
| Machine Category                               | 10  | 20                                     | 30                                     | 40                                  | 50                                    |
|--|---|--|--|-------------------------------------|---------------------------------------|
| <b>Tine Size (")</b>                           | <b>2x6x48</b><br><i>51x152x1219</i>       | <b>2.25x6x48</b><br><i>57x152x1219</i> | <b>2.75x7x48</b><br><i>70x178x1219</i> | <b>3x7x48</b><br><i>76x178x1219</i> | <b>3.5x8x60</b><br><i>89x203x1524</i> |
| <b>A. Clamp Opening @ Tip (")</b>              | <b>88</b><br><i>2235</i>                  | <b>88</b><br><i>2235</i>               | <b>88</b><br><i>2235</i>               | <b>98</b><br><i>2489</i>            | <b>100</b><br><i>2540</i>             |
| <b>B. Height of Load Area (LF-1, LF-W) (")</b> | <b>73</b><br><i>1854</i>                  | <b>73</b><br><i>1854</i>               | <b>73</b><br><i>1854</i>               | <b>84</b><br><i>2134</i>            | <b>85</b><br><i>2159</i>              |
| <b>C. Clamp Closure (")</b>                    | <b>12</b><br><i>305</i>                   | <b>12.5</b><br><i>318</i>              | <b>14</b><br><i>355</i>                | <b>12.5</b><br><i>318</i>           | <b>12.5</b><br><i>318</i>             |
| <b>D. Min. Rollback @ Ground</b>               | <b>20°</b>                                | <b>20°</b>                             | <b>20°</b>                             | <b>20°</b>                          | <b>20°</b>                            |
| <b>Overall Width (")</b>                       | <b>72</b><br><i>1829</i>                  | <b>72</b><br><i>1829</i>               | <b>72</b><br><i>1829</i>               | <b>72</b><br><i>1829</i>            | <b>72</b><br><i>1829</i>              |
| <b>Max. Width Over Tines (")</b>               | <b>68</b><br><i>1727</i>                  | <b>67.5</b><br><i>1715</i>             | <b>67.5</b><br><i>1715</i>             | <b>67.5</b><br><i>1715</i>          | <b>66.5</b><br><i>1689</i>            |
| <b>Min. Width Over Tines (")</b>               | <b>36</b><br><i>914</i>                   | <b>36</b><br><i>914</i>                | <b>36</b><br><i>914</i>                | <b>36</b><br><i>914</i>             | <b>36</b><br><i>914</i>               |
| <b>Weight (lbs.)</b>                           | <b>LF</b><br><b>1470</b><br><i>667</i>    | <b>1545</b><br><i>701</i>              | <b>2125</b><br><i>964</i>              | <b>2565</b><br><i>1163</i>          | <b>3430</b><br><i>1556</i>            |
|  | <b>LF-1</b><br><b>2210</b><br><i>1002</i> | <b>2345</b><br><i>1164</i>             | <b>3070</b><br><i>1393</i>             | <b>3610</b><br><i>1637</i>          | <b>4720</b><br><i>2141</i>            |
|  | <b>LF-W</b><br><b>2415</b><br><i>1095</i> | <b>2625</b><br><i>1191</i>             | <b>3135</b><br><i>1422</i>             | <b>3790</b><br><i>1719</i>          | <b>4965</b><br><i>2252</i>            |

(mm/kg)

Specifications subject to change without notice.



90" Wide Backframe Optional



## INSTALLATION INFORMATION

All Rockland LF Log Forks and Grapples mount in place of the standard bucket using factory pins or specified coupler brackets. Grapples equipped with clamps come complete with all necessary piping and hydraulics, including jumper hoses which connect to the loader's boom arm piping. A three-spool valve and boom arm piping must be installed on the loader to complete the installation.

### WARRANTY

Rockland LF Log Forks and Grapples are guaranteed against failure due to defective design, workmanship or materials for a period of two years or 4000 hours.



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