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Header 5

List View

General Information | Contact | Default Values | Discount | Document Information

Procurement Folder: 575001

SO Doc Code: CRFQ

Procurement Type: Central Master Agreement

SO Dept: 0803

Vendor ID: VS0000019091

SO Doc ID: DOT1900000125

Legal Name: DOOSAN INFRACORE NORTH AMERICA LLC

Published Date: 7/12/19

Alias/DBA:

Close Date: 7/25/19

Total Bid: \$8,253,673.50

Close Time: 13:30

Response Date: 07/24/2019

Status: Closed

Response Time: 10:20

Solicitation Description: ADDENDUM 1 4WD RUBBER TIRED WHEEL LOADER W/BUCKET

Total of Header Attachments: 5

Total of All Attachments: 5



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**State of West Virginia
 Solicitation Response**

Proc Folder : 575001

Solicitation Description : ADDENDUM 1 4WD RUBBER TIERED WHEEL LOADER W/BUCKET (7019EC15)

Proc Type : Central Master Agreement

Date issued	Solicitation Closes	Solicitation Response	Version
	2019-07-25 13:30:00	SR 0803 ESR06141900000005802	1

VENDOR
VS0000019091 DOOSAN INFRACORE NORTH AMERICA LLC

Solicitation Number: CRFQ 0803 DOT1900000125

Total Bid : \$8,253,673.50 **Response Date:** 2019-07-24 **Response Time:** 10:20:30

Comments:

FOR INFORMATION CONTACT THE BUYER
 Crystal G Hustead
 (304) 558-2402
 crystal.g.hustead@wv.gov

Signature on File	FEIN #	DATE
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	4WD RUBBER TIRED WHEEL LOADER W/BUCKET	50.00000	EA	\$134,548.470000	\$6,727,423.50

Comm Code	Manufacturer	Specification	Model #
22101501			

Extended Description :	4WD RUBBER TIRED WHEEL LOADER WITH BUCKET
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Comments: Doosan DL200-5-US10

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	OPTIONAL: LAND CLEARING RAKE	50.00000	EA	\$13,004.200000	\$650,210.00

Comm Code	Manufacturer	Specification	Model #
22101501			

Extended Description :	OPTIONAL: LAND CLEARING RAKE
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Comments: Craig Attachment CLR-CL (C-95375)

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	OPTIONAL: LOG AND LUMBER FORKS	50.00000	EA	\$17,520.800000	\$876,040.00

Comm Code	Manufacturer	Specification	Model #
22101501			

Extended Description :	OPTIONAL: LOG AND LUMBER FORKS
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Comments: Craig Attachment CLLF-2 (C-95374)

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	DL200-5-US10 2020 Year	50	\$134,548.47	\$6,727,423.50
2	Optional: Log and Lumber Forks	Craig CLLF-2 (C-95374) 2019	50	\$ 17,520.80	\$876,040.00
3	Optional: Land Clearing Rake	Craig CLR-CL (C-95375) 2019	50	\$ 13,004.20	\$650,210.00
Total Bid Amount					\$8,253,673.50

Vendor Information

Company Name: Doosan Infracore North America, LLC.

Contract Manager: David Dixon

Address: 2905 Shawnee Industrial Way, Suite 100

Suwanee, GA 30024

Phone: 470-865-1585

Fax:

Email: david.dixon@doosan.com

Signature:

**WHEEL LOADERS
2.5 – 4.0 YD³**

DOOSAN



	Bucket Capacity Heaped, ISO / SAE	Operating Weight	Rated Power Gross
DL200-5	2.6 yd ³ (2.0 m ³)	25,795 lb. (11,700 kg)	142 hp (106 kW)
DL200TC-5	2.6 yd ³ (2.0 m ³)	26,220 lb. (11,895 kg)	142 hp (106 kW)
DL220-5	3.0 yd ³ (2.3 m ³)	27,381 lb. (12,420 kg)	160 hp (119 kW)
DL250-5	3.3 yd ³ (2.5 m ³)	30,115 lb. (13,660 kg)	172 hp (128 kW)
DL250TC-5	3.3 yd ³ (2.5 m ³)	31,592 lb. (14,330 kg)	172 hp (128 kW)

WHEN YOU CHOOSE DOOSAN

as your heavy equipment brand, you'll have the backing of a strong, global organization – with benefits that extend far beyond the capabilities of a new machine.

DOOSAN

STRONG BRAND

Doosan began in 1896. Its heritage in excavators goes back to 1978. Wheel loader production began in 1992, while the company's first articulated dump truck was designed in 1972. Throughout its years in the heavy equipment industry, Doosan has listened to its North American customers, making many improvements – and developing new machines – as a result of feedback from owners and operators. From 2005 to 2015, Doosan grew from its position as the seventh-largest construction equipment manufacturer in the world to the fifth-largest.

STRONG DEALERS

Doosan serves you in partnership with its dealers – and similarly, your Doosan dealer is intended to be a trusted partner for you. Whether it's Doosan® parts, authorized service and maintenance, or even advice on how to get more value from your machine, Doosan dealers are behind you on every job.

STRONG EQUIPMENT

Doosan products are known for reliably exceeding customers' most demanding expectations. It's why we're one of the fastest-growing heavy equipment brands in North America. Doosan offers crawler excavators, wheel excavators, compact excavators, wheel loaders, articulated dump trucks, log loaders, material handlers and a variety of job-matched attachments – all designed to perform in the most difficult working conditions.

STRONG NORTH AMERICAN OPERATIONS

Doosan has built a solid infrastructure to support your equipment. It includes parts distribution in Illinois and Ontario, service training and product management in Georgia, sales training and The Real Operation Center (ROC) customer experience facility in Arizona, attachments design and development in Minnesota, plus sales and marketing support in North Dakota. We can fully support your equipment from coast to coast.

STRONG WARRANTY

Customers choose the months and hours of coverage in their transferable warranty. Options include a standard warranty of 12 months or up to 1,500 hours (depending on the machine) or up to the five-year, 7,500-hour Elite Assurance™ coverage for the powertrain only, the powertrain plus hydraulics or the full machine.

PERFORMANCE

Even the most brutal workday looks better from the seat of your Doosan wheel loader. Here you command tremendous lift height and capacity, plus enough torque to bite into the toughest materials. Scoop, carry material, load trucks and even run attachments. Cut long days and tough jobs down to size in a hurry – and do it profitably – in a Doosan wheel loader.



Optimized Engine Horsepower

A finely tuned horsepower curve and higher torque ensure you can move mountains of material fast. A high pressure common rail fuel injection system and cooled exhaust gas recirculation (CEGR) valve reduce emissions.



Outstanding Traction and Pushing Power

Doosan axles are carefully designed to maximize traction, provide easy maneuverability and generate excellent pushing power, making short work of even the biggest pile.

Limited Slip Differential allows the wheel with the most traction to receive the proper torque, providing superior tractive effort and maneuverability in tough terrain.

Images of Doosan wheel loaders may show other than standard equipment.



Lift Capacity

There's no secret to doing more work in less time. You have to quickly and efficiently handle the biggest, heaviest load that you can. With its load-sensing, closed center hydraulics, Doosan wheel loaders deliver superior lift capacities for every model size.

Self-Adjusting Brakes increase performance and minimize maintenance. If needed, a technician can easily check the brakes and adjust externally. The brake piping is safely integrated with the axle housing and protected from jobsite debris.

Optional Front-Locking Differential locks the front left and right wheels together, providing superior traction for driving over loose, slippery terrain or pushing into big, heavy piles (DL220-5, DL250-5 and DL250TC-5 only).

Power Modes

Choose from three different power modes to change machine performance for job conditions or reduce fuel consumption.

Power Mode delivers the highest level of performance for quick loading and fast travel. Finish more heavy-duty work in less time.

Normal Mode is ideal for general work conditions and optimal fuel consumption.

Economy Mode minimizes fuel consumption and reduces engine sound levels, providing for comfortable, economical light-duty work.

Planetary Final Drives

The planetary final drives transfer torque to the wheels through the transmission and differential. They enable higher travel speeds and greater torque. The outboard, hub-mounted design makes maintenance easy.



PRODUCTIVITY

Productivity is what it's all about – and Doosan delivers. Whether you're loading a small truckload or moving a mountain of material, your Doosan wheel loader will have you feeling good about the results at day's end.



Fast Cycle Times

Speed and control are the keys to optimal production. Doosan wheel loaders are engineered to perfectly balance both. Durable, low-maintenance vane pumps deliver the power you need to complete every job quickly.

Tier 4 (T4) Compliant

Optimized to provide more power output with reduced fuel consumption, Doosan wheel loaders are designed with T4 compliant engines to reduce air pollution.



Diesel Oxidation Catalyst (DOC)

In the DOC, carbon monoxide (CO) and particulate matter (PM) emissions are transformed into harmless water (H₂O) and carbon dioxide (CO₂).

Evaporative Module

In the evaporative module, or mixing pipe, diesel exhaust fluid (DEF) solution is injected in small doses and mixed with hot exhaust gases, decomposing it into urea (CO(NH₂)₂) and water vapor, which then catalyzes into carbon dioxide and ammonia (NH₃).

Selective Catalytic Reduction (SCR)

In the SCR canister, nitrogen oxide mixes with ammonia, and a chemical reaction takes place, resulting in nitrogen (N) and water vapor emitting from the system. The SCR canister also acts as the silencer or muffler.

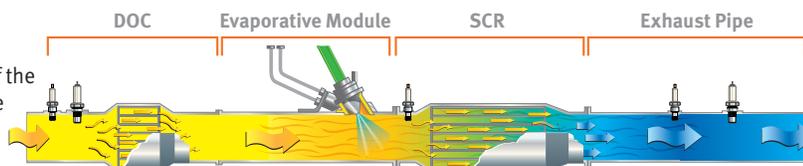
Diesel Exhaust Fluid (DEF)

DEF is a solution of pure urea and deionized water. A minimum level of DEF is required for proper machine operation, and the DEF supply tank is heated for proper operation in cold weather. DEF is available from your Doosan dealer in various container sizes.



Cooled Exhaust Gas Recirculation (CEGR)

CEGR recycles a portion of the engine exhausts to reduce oxygen (O) and lower the temperature in the combustion chamber. This reduces nitrogen oxide (NO_x) emissions.



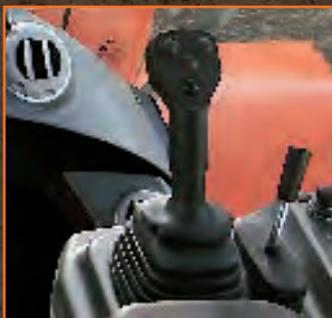


Auto Idle

The standard auto idle feature automatically reduces the engine rpm to standby idle a few seconds after the steering wheel, gearshift control lever and accelerator cease movement. This reduces noise, improves jobsite communications and saves fuel. When you move the controls, the loader automatically returns to working idle.

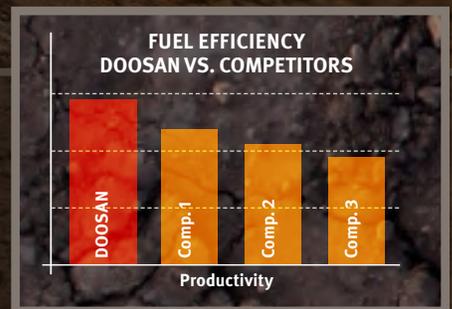
FNR Joystick

Direction changes don't get any simpler. Just push the joystick buttons to switch between forward, neutral and reverse without even removing your hands from the controls.



Optional Load Isolation System

The load isolation system, sometimes referred to as ride control, cushions the lift arm while traveling over rough terrain, minimizing the loss of material while carrying a load and reducing operator fatigue. It also comes in handy when your customers pay for material by the bucket.



Fuel Efficiency

Fuel use is a significant cost of operation, and Doosan efficiently delivers more work for the money. In our fuel efficiency tests against equivalent machines from other manufacturers, the Doosan wheel loader consistently moves more material per gallon of fuel.

Lift Arm Options

Z-Bar Lift Arm Linkage is designed for heavy lifting in loading applications, with geometry that enables rapid bucket movement and proper angle positioning in every situation.



Standard Lift vs. High Lift

Standard Z-Bar Linkage has excellent breakout forces for easier digging and penetration into tough materials. It increases the lifting capacity of every Doosan loader for best-in-class performance.

Optional High-Lift Z-Bar Linkage is designed for applications requiring the highest possible dumping height and reach. It's ideal for cement plants, scrap, mulch or wastewater transfer stations.

Parallel Lift Linkage is designed to give you precise control over the movement of buckets, pallet forks and other attachments in applications other than loading. This design keeps the attachment level, allowing for faster lifting and placing of materials.

Optional Hydraulic Coupler

This feature increases your productivity with non-hydraulic attachments, such as the pallet fork, saving you time by enabling you to switch from one attachment to the next without even leaving the cab.



Return to Dig

Sensors on the lift arm and bucket linkage allow you to change your “return to dig” setting from inside the cab. The cylinders and cutting edge return to the same position every time, enabling more efficient, consistent work.

Lift Kickout

Set the maximum lift height for working inside buildings or other areas with height restrictions. Simply pull back on the control stick to override.

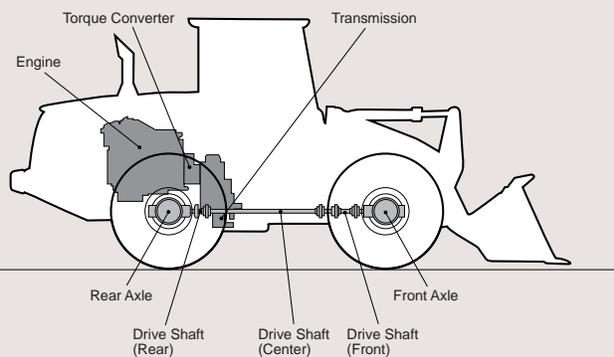
Whether you're loading a small truckload or moving a mountain of material, Doosan delivers amazing results in less time.



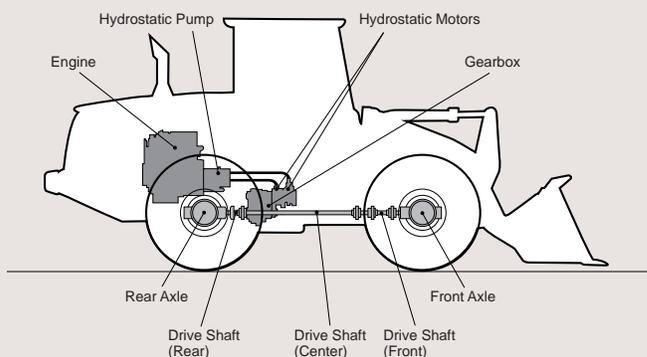
Driveline Comparison

The drive shafts and axles* visually remain similar between the two driveline designs; however, the torque converter and four-speed transmission is replaced by a hydrostatic pump and two hydrostatic motors along with a gearbox.

Torque Converter Transmission



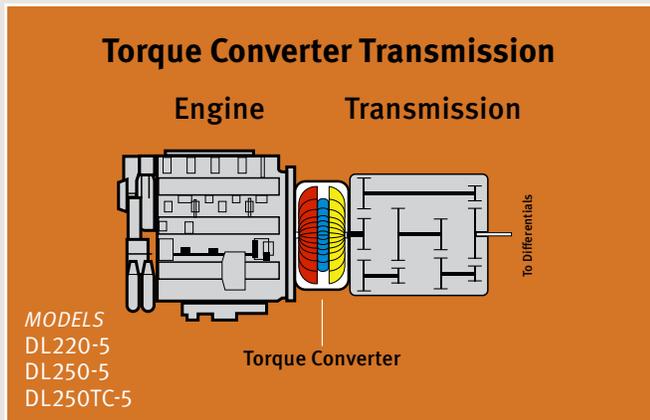
Hydrostatic Drive System



*Front and rear differential configurations may differ between the two systems based on options selected.

Torque Converter Transmission

The automatic powershift torque converter transmission in the DL220-5, DL250-5 and DL250TC-5 is optimized with engine power providing efficiency in load and carry operations. With four gears and three drive modes, the operator has the flexibility to configure the machine to the application. A transfer case is eliminated as the inter-axle differential is integrated in the transmission housing.



Transmission Mode

Choose from three transmission modes – manual, auto 1-4 and auto 2-4 with manual kickdown – to match the working conditions you face, and tailor performance for better productivity.

Transmission Optimization is a key feature of the automatic transmission modes. It calibrates different shift points to tailor the amount of power and engine torque per gear. When you engage either auto 1-4 or auto 2-4 in power mode or normal mode, the transmission shift point occurs 20 percent later – allowing more torque and power within each gear range. In economy mode, the automatic transmission shifts 20 percent earlier for increased fuel efficiency.

Manual is ideal when the job requires precise speed control.

Auto 1-4 automatically shifts up when you need more speed and downshifts when the job demands more power or torque. It's excellent for heavy-duty applications.



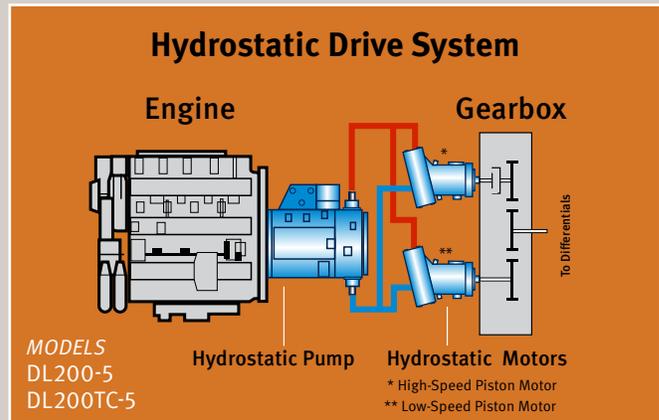
Auto 2-4 with Manual Kickdown gives you automatic shifting between gears 2 through 4, with a manual downshift into first gear when you need it. It provides the best performance for less demanding work conditions.

Transmission Cutout

Need more engine power for lift arm speed? In lower gears, simply depress the left brake pedal to disengage the transmission. Disengage transmission cutout with your switch panel to start moving on an incline with greater ease.

Hydrostatic Drive System

The new hydrostatic drive system in the Doosan DL200-5 and DL200TC-5 delivers higher performance at lower engine rpm, which also improves fuel efficiency. Additional features include the ability to control the traction characteristics and configure speed management to increase your productivity, and dynamic braking that automatically slows the machine and reduces wear on the brakes.



Single Pump, Dual Motor Hydrostatic System

A single hydrostatic pump directs oil flow to two separate hydrostatic piston motors: one low-speed and one high-speed. These motors are connected to a gearbox that seamlessly transfers power to the driveline from the low-speed or high-speed motor, depending on the demands of the job. If the task demands it, both can power the driveline together. This provides optimal power at all times and automatic torque delivery to the driveline in every kind of application.

Traction Control Management

With traction control management, three modes allow you to easily match traction to the jobsite conditions, so you can prevent wheel slippage while digging, stockpiling and loading.

Max provides maximum traction force.

Traction Control allows you to choose from three intermediate levels of traction force.

Slip is optimized primarily for slippery roadway conditions.

To instantly return to the max traction mode, just press the kick-down button on the joystick control or directional control lever.

Speed Management

A variable speed control feature allows you to obtain full engine rpm for optimal lift arm and hydraulic attachment performance while fine-tuning the maximum machine travel speed in the first gear range. This gives you precise travel control without sacrificing hydraulic power for the job.

DURABILITY / RELIABILITY

Doosan builds its machines so they're ready to work when you are. Whether it's solid construction, heavy-duty parts and materials, or innovative features that keep you on the job with fewer service intervals, your wheel loader ranks among the toughest and most profitable in the industry.



When you get up close to a Doosan wheel loader, you can see that this machine is built to last. With heavy-duty parts, quality materials and superb construction, you can rely on performance, productivity and profit day after day. Plus, innovative designs keep you on the job with fewer service intervals – so you spend less time in the shop.





Thick Lift Arm Plates

Thick, solid-steel lift arm plates provide maximum durability in harsh conditions – along with improved lift capacities. A narrower arm design overall increases your visibility.

Tough, Rigid Frame

Each frame section is designed to maximize the life of the machine. Thick steel plates, cross members and gussets join to form a strong, durable articulation joint that stands up to years of difficult work.



Double Roller Articulation Joint Bearing

To create an articulation pivot point with superior strength, tough double roller bearings are used at both the top and bottom hinge points between the front and rear frames.



Large Center Driveline Bearing

An oversized bearing, that is vented to prevent over greasing, increases durability of the front drive shaft.



All-Steel Panels

Access panels on Doosan wheel loaders allow easy maintenance access, and they're made of durable formed metal to protect critical engine, hydraulic and electrical components.



Lift Arm Pin Protection

Lift arm pins are protected with bushings and dust covers to increase pin life and reduce maintenance.

Variable Speed Cooling Fan

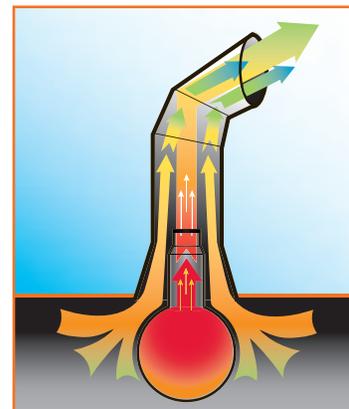
The variable speed fan slows and speeds up as required by the work demands of your loader. In lighter-duty conditions, the coolant temperature is low and the fan slows – saving fuel and extending the life of your cooling system.

Reversible Cooling Fan

By pressing a console switch, the cooling fan can be reversed to assist in keeping the cooling system clean in extremely dusty applications. Press it to keep the machine running at optimal temperature. You can also set it to auto reverse for a few minutes at a time at different intervals – at 30, 60, 90 or 120 minutes depending on work conditions.

Separate Cooling and Engine Compartments

Doosan isolates the wheel loader engine from the cooling system. This design increases cooling capacity and extends the life of your engine components.



Exhaust Heat Exchanger

As exhaust leaves the muffler on your Doosan wheel loader, it enters a larger external riser pipe with rain shield. This design creates a vacuum that pulls hot air out of the engine compartment, making your engine and cooling system run more efficiently.

COMFORT

You can't overlook the relationship between comfort and productivity. That's why comfort is central to the Doosan cabin design. It's packed with high-end comfort that enables you to retain a team of productive, experienced and satisfied employees.

Quiet Operation

Operators stay relaxed and focused on the job with a quiet operating environment. Noise levels in the cabin stay below a comfortable 72 decibels thanks to the variable speed cooling fan, double-walled muffler, soundproof materials throughout the engine compartment, and tightly sealed and pressurized cabin.

Excellent Visibility

Large front and rear glass surface areas provide an excellent view to the loader workgroup and jobsite. Narrow corner pillars and small window joints increase visibility to the front of the machine. Heated mirrors provide visibility to the sides and rear of the machine, even in cold temperatures.



Easy Entry and Exit

Grab handles and offset steps with slip-resistant surfaces provide easy access to the cabin and easy exit when work is finished. A 180-degree swinging door that can lock to the open position provides a wide opening to move in and out of the machine. Inside, ample floor space gives you room to work and exceptional comfort.

Ergonomic Controls

From the steering wheel and joystick to the switches for optional equipment, all controls are located within easy reach for intuitive, easy operation.



Optional Rearview Camera

Provides the operator with an additional means to view the machine's surroundings, allowing for increased productivity.

Automotive-Style Heat and Air Conditioning

Stay comfortable all year with high-capacity heating and cooling vents and an easy-to-control temperature. Automatic temperature control senses and adjusts to the temperature setting automatically. A memory function returns it to your preferred temperature if you shut the machine off and restart later.

Easy-to-Read LCD Display Panel

An easy-to-read LCD display panel is placed within easy view for monitoring critical machine data and receiving machine warnings.



Standard Radio with CD Player and MP3 Port

Tune into your favorite over-the-air stations, or take your favorite digital music format with you to work, to make every hour on the job more enjoyable.

Adjustable Comfort

The standard air suspension seat has multiple adjustment points, allowing you to select the most comfortable position.

- A Seat Height
- B Seat Fore/Aft
- C Back Recline
- D Lumbar Support
- E Armrest Angle
- F Seat Heater (Opt.)
- G Headrest Up/Down



EASY MAINTENANCE

If it's easy to do, regular maintenance gets done – and you'll get more production and efficiency from your loader. That's how Doosan approaches maintenance. First, we build the machine tough for long-lasting performance and longer service intervals. Next, we make machine care second nature to every operator with centrally located maintenance points, onboard diagnostic systems and easy component access. If you want durability and simple maintenance, Doosan delivers.



Easy Component Access

Big, easy-to-open access covers and fold-up panels provide fast, ground-level access to critical engine and hydraulic components. When it's easy to reach and service components, you save time on maintenance and reduce your operating costs.

Doosan Telematics

Doosan Telematics provides machine intelligence through a device that comes standard on all Doosan machines. The device communicates wirelessly through either cellular or satellite communication. Machine information can be viewed via the CoreTMS website, which then allows you to assess various aspects of your Doosan machine.



With Doosan Telematics, you can:

- Review maintenance schedules
- Maximize machine utilization and uptime
- Improve operator efficiency and training
- Monitor fuel use and efficiency
- Receive theft prevention alerts



Sight Glass for Major Fluid Levels

Sight glasses on the machine provide quick, easy fluid-level checks. All it takes is a quick visual check to know if your fluid reservoirs are properly filled.



Centralized Remote Hydraulic Diagnostic Ports

You can review pressure and troubleshoot hydraulic issues from one check port bank. In minutes you can review pilot charge, brake system charge, load sensing, steering system, fan and steering pressures, along with the main relief setting.



Color-Coded, Labeled Wiring and Hydraulic Hoses

Strategically labeled wiring enables plug-and-play installation of electrical accessories, such as the rotating beacon. It also allows quicker, easier electrical troubleshooting of the electrical and hydraulic systems.

Self-Diagnostics

The LCD monitor helps you monitor critical systems in real time. Plus, you can access historical machine alerts right from the screen in the cabin.



Doosan Monitoring System with Laptop Access

The Doosan Monitoring System is a diagnostic program that gives your dealer's technician a direct communications link with your wheel loader. During operation, it monitors all critical data and provides a complete history of operation and a real-time log of machine failures. Armed with information like this, your dealer service personnel can fix issues fast – and you can get back to work.

Remote Drain Ports

Easy-to-access remote drain valves make for fast, convenient exchanges of engine oil and cooling system coolant.



Remote Grease Points

For a long-lasting machine, daily maintenance is critical. Remote grease points make it easier to lubricate hard-to-reach pins on the lift arm and articulation system. Daily greasing happens on the ground – and it's more likely to get done.

VERSATILITY

Do more with your machine. Doosan wheel loaders are optimized for attachment versatility – bringing you more opportunities to utilize your equipment investment, and possibly enabling you to expand your business. Our tough attachments are matched to your machine’s operator weight and load settings – so you can rely on epic productivity with every job.



Selectable Engine Power Modes

The Doosan wheel loader has three engine power modes — economy, normal and power — to further adapt your loader’s performance to the application and deliver the right balance of power and fuel economy.

Standard Attachment Hydraulics

For hydraulic attachments, like the multi-purpose bucket, an auxiliary spool comes standard. No extra installation required. Hydraulic lines down the boom are optional.





Optional Quick Coupler

Quickly change many of your wheel loader's non-hydraulic attachments without leaving the seat. A four-point style pick-up means you can hook up attachments easily, even on irregular terrain.

Boom Float

The boom float allows your bucket to follow the ground contours, which saves you time and increases productivity when backdragging during snow removal.



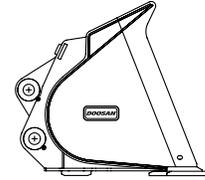
General Purpose Bucket



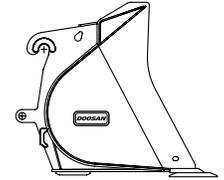
With a sloped bottom for maximum filling and material retention, this is the perfect bucket for day-to-day material handling. Capacities range from 4 to 6.5 yd³.

Available for DL200-5, DL200TC-5, DL220-5, DL250-5 and DL250TC-5 wheel loaders. All available with bolt-on cutting edge or teeth.

Pin-On



Quick Coupler



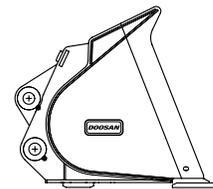
Light Material Bucket



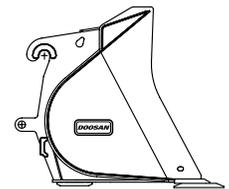
When you need to move snow, mulch or other light material in a hurry, the light material bucket is the economical choice. Comes standard with bolt-on cutting edge.

Available for DL200-5, DL200TC-5, DL220-5, DL250-5 and DL250TC-5 wheel loaders. All available with bolt-on cutting edge.

Pin-On



Quick Coupler



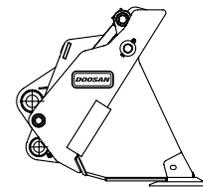
Multi-Purpose Bucket



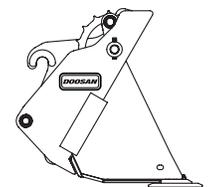
Leveling, dozing, digging, grappling, loading and dumping – this multi-purpose bucket is ready for whatever you've got. Capacities range from 3.5 to 4 yd³.

Available for DL200-5, DL200TC-5, DL220-5, DL250-5 and DL250TC-5 wheel loaders. All available with bolt-on cutting edge or teeth.

Pin-On



Quick Coupler

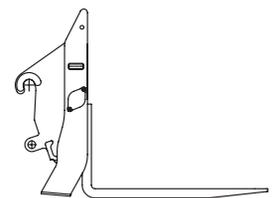


Pallet Fork



Easily lift, carry and place materials. Available with with 48" or 60" tines for DL200-5, DL200TC-5, DL220-5, DL250-5 and DL250TC-5 wheel loaders.

Quick Coupler



Quick couplers are available in two designs – JRB and ISO style.

For more information on Doosan attachments, refer to the Doosan Wheel Loader Attachment literature.

General Specs

			DL200-5 Standard (US10)	DL200TC-5 Tool Carrier (US10)	DL220-5 Standard (US10)	DL250-5 Standard (US10)	DL250TC-5 Tool Carrier (US10)
ENGINE							
MAKE			Perkins	Perkins	Doosan	Doosan	Doosan
MODEL			1204F	1204F	DL06	DL06	DL06
NUMBER OF CYLINDERS		INLINE	4	4	6	6	6
RATED POWER, GROSS (per SAE J1995)		hp (kW) @ rpm	142 (106) @ 2200	142 (106) @ 2200	160 (119) @ 2100	172 (128) @ 2100	172 (128) @ 2100
MAXIMUM TORQUE, GROSS (per SAE J1995)		ft.-lb. (kgf-m) @ rpm	413 (57) @ 1400	413 (57) @ 1400	542 (75) @ 1400	593 (82) @ 1400	593 (82) @ 1400
PISTON DISPLACEMENT		in. ³ (L)	269 (4.4)	269 (4.4)	360 (5.9)	360 (5.9)	360 (5.9)
BORE AND STROKE		in. x in. (mm x mm)	4.1" x 5" (105 x 127)	4.1" x 5" (105 x 127)	3.9" x 4.9" (100 x 125)	3.9" x 4.9" (100 x 125)	3.9" x 4.9" (100 x 125)
STARTER		V, hp (kW)	24, 7.4 (5.5)	24, 7.4 (5.5)	24, 8 (6)	24, 8 (6)	24, 8 (6)
BATTERY (2)		V, AH, CCA	2x12, 100, 900	2x12, 100, 900	2x12, 100, 900	2x12, 100, 900	2x12, 100, 900
ALTERNATOR		V, amp	24, 85	24, 85	24, 80	24, 80	24, 80
AIR CLEANER			Double Element	Double Element	Double Element	Double Element	Double Element
HYDRAULICS							
MAIN PUMPS		gpm (L/min.)	49 (184)	49 (184)	41 (155)	41 (155)	41 (155)
SYSTEM PRESSURE (WORK)		psi (kg/cm ²)	3190 (224)	3190 (224)	3626 (255)	3843 (270)	3843 (270)
SYSTEM PRESSURE (STEER)		psi (kg/cm ²)	2830 (199)	2828 (199)	2828 (199)	3843 (270)	3843 (270)
BOOM SPEED	UP (UNLOADED)	sec.	5.7	5.1	6	6	6
	DOWN	sec.	3.6	4.2	3.5	3.7	3.1
BUCKET SPEED	CROWD (UNLOADED)	sec.	1.6	3	1.9	1.9	2.1
	DUMP	sec.	1.6	2.6	1.2	1.4	3.7
ENVIRONMENT							
SOUND LEVEL (per ISO 6394)		dB(A)	102	102	102	101	101
CABIN SOUND LEVEL (per ISO 6394)		dB(A)	70	70	71	71	71
TRANSMISSION SPEEDS							
TRAVEL SPEED - FORWARD (4)		mph (km/h)	8/8/12/24 (13/13/20/38)	8/8/12/24 (13/13/20/38)	4.3/8/15/24.2 (7/12.8/24.2/39)	4.1/7.4/14.3/23.5 (6.6/11.9/23/37.8)	4.1/7.4/14.3/23.5 (6.6/11.9/23/37.8)
TRAVEL SPEED - REVERSE (3)		mph (km/h)	8/8/12 (13/13/20)	8/8/12 (13/13/20)	4.6/8.4/15.8 (7.4/13.5/25.4)	4.3/7.8/15 (6.9/12.5/24.2)	4.3/7.8/15 (6.9/12.5/24.2)
MAXIMUM GRADE		% (*)	55 (29)	55 (29)	58 (30)	58 (30)	58 (30)
REFILL CAPACITIES							
FUEL TANK		gal. (L)	45 (172)	45 (172)	58.6 (222)	58.7 (222)	58.7 (222)
DIESEL EXHAUST FLUID TANK		gal. (L)	5 (19)	5 (19)	8.3 (31.5)	8.3 (31.5)	8.3 (31.5)
COOLING SYSTEM (RADIATOR)		gal. (L)	8.5 (32)	8.5 (32)	10.6 (40)	10.6 (40)	10.6 (40)
ENGINE OIL		gal. (L)	2.8 (10.5)	2.8 (10.5)	7.1 (27)	7.1 (27)	7.1 (27)
TRANSMISSION		gal. (L)	-	-	8 (30)	8 (30)	8 (30)
GEARBOX		gal. (L)	0.7 (2.7)	0.7 (2.7)	-	-	-
FRONT AXLE		gal. (L)	4 (15)	4 (15)	5.7 (21.5)	9.3 (35)	9.3 (35)
REAR AXLE		gal. (L)	3.5 (13.3)	3.5 (13.3)	5.7 (21.5)	6.1 (23)	6.1 (23)
HYDRAULIC SYSTEM		gal. (L)	34.1 (129)	34.1 (129)	31.7 (120)	31.7 (120)	31.7 (120)
HYDRAULIC CYLINDERS							
STEERING (2)	BORE x ROD x STROKE	in. x in. x in. (mm x mm x mm)	2.8" x 1.4" x 14.4" (70 x 35 x 366)	2.8" x 1.4" x 14.4" (70 x 35 x 366)	2.8" x 1.8" x 16.7" (70 x 45 x 425)	2.8" x 1.8" x 16.7" (70 x 45 x 425)	2.8" x 1.8" x 16.7" (70 x 45 x 425)
LIFT (2)	BORE x ROD x STROKE	in. x in. x in. (mm x mm x mm)	4.9" x 3.0" x 26" (125 x 75 x 669)	4.3" x 3.0" x 31" (110 x 75 x 790)	4.5" x 3.0" x 31.1" (115 x 75 x 790)	4.5" x 3.0" x 31.1" (115 x 75 x 790)	4.5" x 3.0" x 31.1" (115 x 75 x 790)
BUCKET (1) *	BORE x ROD x STROKE	in. x in. x in. (mm x mm x mm)	5.1" x 2.9" x 20" (130 x 75 x 509)	4.1" x 2.6" x 33" (105 x 65 x 843)*	5.1" x 3.1" x 20.3" (130 x 80 x 515)	5.1" x 3.1" x 20.3" (130 x 80 x 515)	4.1" x 2.6" x 34.7" (105 x 65 x 881)*

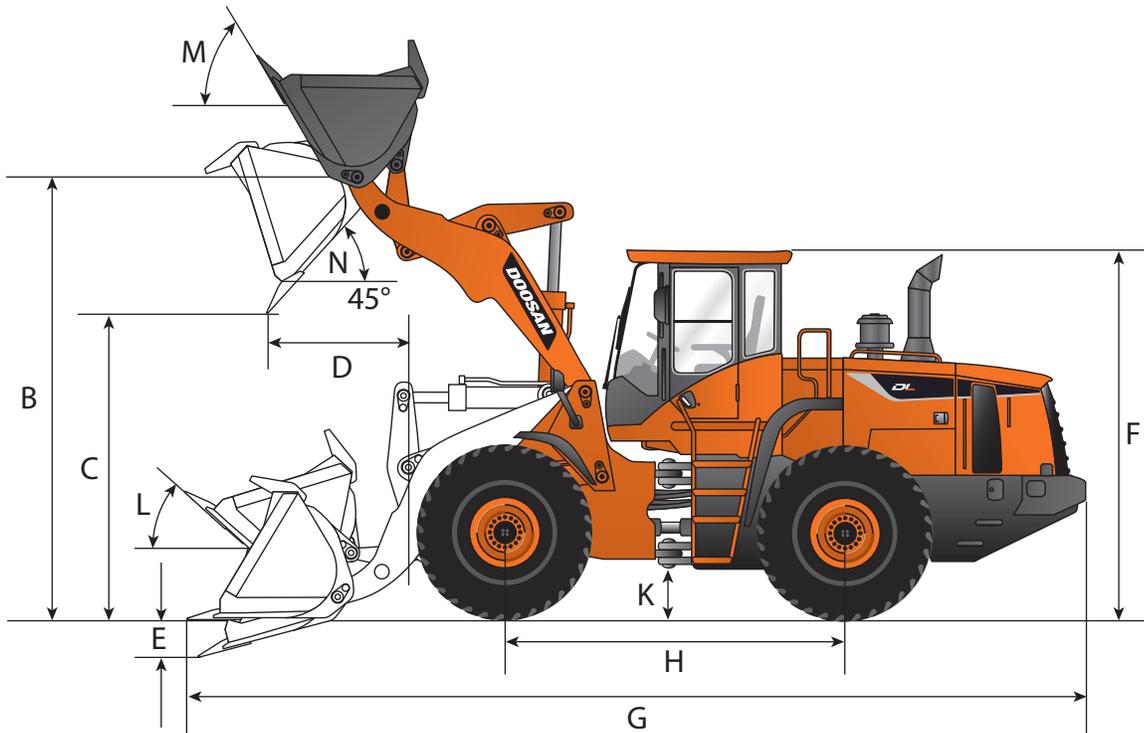
* The DL200TC-5 and DL250TC-5 have TWO bucket cylinders.

NOTE — Where applicable, dimensions are in accordance with Society of Automotive Engineers (SAE) and ISO standards. Specifications and design are subject to change without notice. Pictures of Doosan wheel loaders may show other than standard equipment. All dimensions are shown in inches. Respective metric dimensions are enclosed by parentheses. Doosan Construction Equipment is manufactured with a Quality Management System that is in compliance with ISO 9001:2008.

All dimensions are given for Doosan wheel loaders equipped with standard tires.

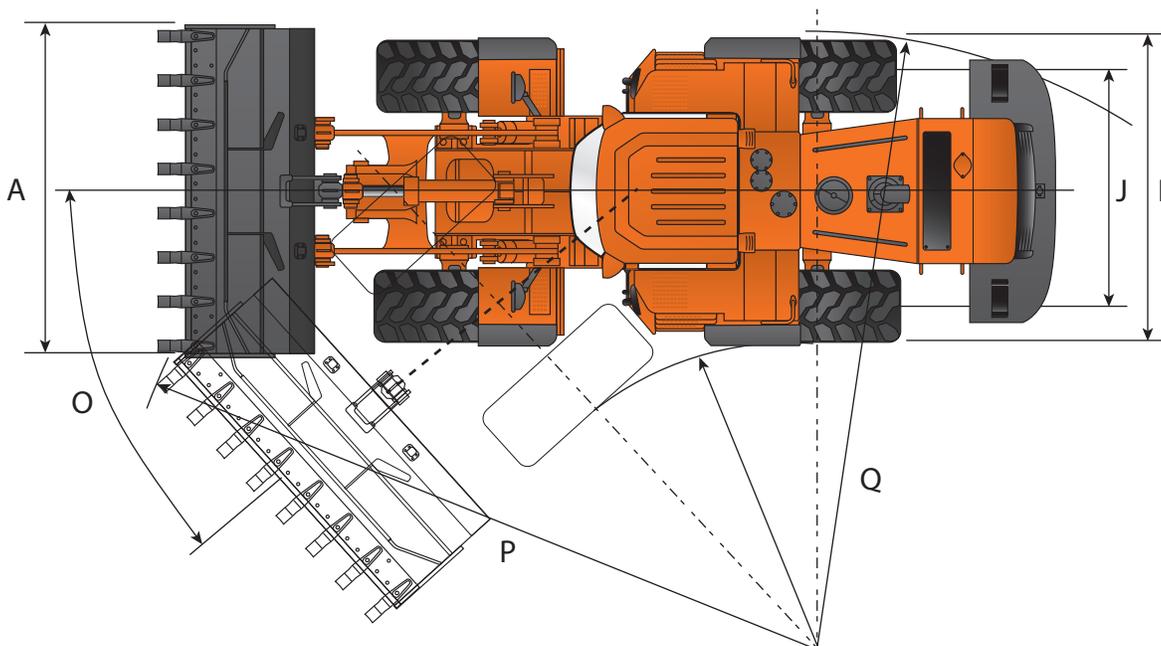
Operational Data

		DL200-5		DL200TC-5	DL220-5
		Standard (US10)	High Lift (US20)	Tool Carrier (US10)	Standard (US10)
BUCKET TYPE: General Purpose		BUCKET MOUNT: Pin-On		BUCKET CONFIGURATION: Bolt-On Edge	
BUCKET CAPACITY, HEAPED ISO/SAE		yd ³ (m ³)	2.6 (2)	2.6 (2)	3 (2.3)
BUCKET WIDTH	A	ft.-in. (mm)	8' 4" (2550)	8' 4" (2550)	8' 4" (2550)
HINGE PIN HEIGHT, MAXIMUM	B	ft.-in. (mm)	12' 3" (3730)	13' 9" (4200)	12' 8" (3860)
DUMP HEIGHT (45°) - FULLY RAISED	C	ft.-in. (mm)	9' 6" (2887)	11' (3347)	9' 3" (2825)
DUMP REACH (45°) - FULLY RAISED	D	ft.-in. (mm)	40" (1015)	39" (985)	42" (1065)
DIGGING DEPTH	E	ft.-in. (mm)	2.4" (60)	6.9" (175)	3.5" (90)
OVERALL HEIGHT, ROPS CABIN	F	ft.-in. (mm)	10' 9" (3280)	10' 9" (3280)	10' 9" (3280)
OVERALL LENGTH	G	ft.-in. (mm)	23' 5" (7135)	24' 10" (7580)	24' 5" (7445)
WHEEL BASE	H	ft.-in. (mm)	9' 6" (2900)	9' 6" (2900)	9' 11" (3010)
WIDTH AT TIRES	I	ft.-in. (mm)	8' 4" (2530)	8' 4" (2530)	8' 1" (2460)
TREAD WIDTH	J	ft.-in. (mm)	6' 4" (1930)	6' 4" (1930)	6' 4" (1930)
GROUND CLEARANCE	K	ft.-in. (mm)	17.3" (440)	17.3" (440)	17.1" (435)
MAX. TILT ANGLE ON GROUND		°	43	43	42
MAX. TILT ANGLE AT CARRY POSITION	L	°	49	50	48
MAX. TILT ANGLE AT FULLY RAISED	M	°	60	63	59
MAX. DUMP ANGLE (FULLY RAISED)	N	°	47	45	48
STEERING ANGLE, MAXIMUM	O	°	40	40	40
EXTERNAL RADIUS, BUCKET EDGE	P	ft.-in. (mm)	19' (5795)	19' 6" (5935)	18' 10" (5740)
EXTERNAL RADIUS, OUTSIDE TIRE	Q	ft.-in. (mm)	17' 2" (5245)	17' 2" (5245)	18' (5475)
TIRE SIZE			20.5-R25 (L3)	20.5-R25 (L3)	20.5-R25 (L3)
OPERATING WEIGHT		lb. (kg)	25,795 (11,700)	26,566 (12,050)	27,381 (12,420)
STATIC TIPPING LOAD (STRAIGHT)		lb. (kg)	21,075 (9560)	17,955 (8145)	18,825 (8540)
STATIC TIPPING LOAD (AT FULL TURN)		lb. (kg)	18,620 (8445)	15,850 (7190)	16,625 (7540)
BREAKOUT FORCE		lbf. (kgf)	22,480 (10,197)	22,930 (10,401)	21,355 (9686)



Operational Data *Continued*

		DL220-5		DL250-5		DL250TC-5
		High Lift (US20)		Standard (US10)	High Lift (US20)	Tool Carrier (US10)
BUCKET TYPE: General Purpose		BUCKET MOUNT: Pin-On		BUCKET CONFIGURATION: Bolt-On Edge		
CAPACITY HEAPED ISO/SAE		yd ³ (m ³)	3 (2.3)	3.3 (2.5)	3.3 (2.5)	3.3 (2.5)
BUCKET WIDTH	A	ft.-in. (mm)	8' 4" (2550)	8' 11" (2740)	8' 11" (2740)	8' 11" (2740)
HINGE PIN HEIGHT, MAXIMUM	B	ft.-in. (mm)	14' 1" (4300)	12' 7" (3858)	14' 2" (4325)	12' 10" (3934)
DUMP HEIGHT (45°) - FULLY RAISED	C	ft.-in. (mm)	10' 9" (3270)	9' 2" (2802)	10' 7" (3246)	9' (2749)
DUMP REACH (45°) - FULLY RAISED	D	ft.-in. (mm)	41" (1040)	42" (1073)	40" (1034)	4' 3" (1299)
DIGGING DEPTH	E	ft.-in. (mm)	7.9" (200)	3.9" (98)	5.4" (137)	3.4" (87)
OVERALL HEIGHT, ROPS CABIN	F	ft.-in. (mm)	10' 9" (3280)	10' 9" (3280)	10' 9" (3280)	10' 9" (3280)
OVERALL LENGTH	G	ft.-in. (mm)	25' 11" (7905)	24' 6" (7475)	25' 9" (7865)	25' 7" (7805)
WHEEL BASE	H	ft.-in. (mm)	9' 11" (3010)	9' 10" (3020)	9' 10" (3020)	9' 10" (3020)
WIDTH AT TIRES	I	ft.-in. (mm)	8' 1" (2460)	8' 7" (2640)	8' 7" (2640)	8' 7" (2640)
TREAD WIDTH	J	ft.-in. (mm)	6' 4" (1930)	6' 8" (2040)	6' 8" (2040)	6' 8" (2040)
GROUND CLEARANCE	K	ft.-in. (mm)	17.1" (435)	17.1" (435)	17.1" (435)	17.1" (435)
MAX. TILT ANGLE ON GROUND		°	43	42	43	40
MAX. TILT ANGLE AT CARRY POSITION	L	°	51	48	51	48
MAX. TILT ANGLE AT FULLY RAISED	M	°	61	59	61	51
MAX. DUMP ANGLE (FULLY RAISED)	N	°	46	48	45	50
STEERING ANGLE, MAXIMUM	O	°	40	40	40	40
EXTERNAL RADIUS, BUCKET EDGE	P	ft.-in. (mm)	20' (6100)	19' 9" (6045)	20' 1" (6134)	17' 11" (5475)
EXTERNAL RADIUS, OUTSIDE TIRE	Q	ft.-in. (mm)	18' (5475)	18' (5475)	18' (5475)	18' (5475)
TIRE SIZE			20.5-R25 (L3)	20.5-R25 (L3)	20.5-R25 (L3)	20.5-R25 (L3)
OPERATING WEIGHT		lb. (kg)	28,296 (12,835)	30,115 (13,660)	31,129 (14,120)	31,592 (14,330)
STATIC TIPPING LOAD (STRAIGHT)		lb. (kg)	19,412 (8805)	23,997 (10,885)	21,440 (9725)	20,470 (9285)
STATIC TIPPING LOAD (AT FULL TURN)		lb. (kg)	17,141 (7775)	21,186 (9610)	18,927 (8585)	18,078 (8200)
BREAKOUT FORCE		lbf. (kgf)	25,180 (11,421)	23,830 (10,809)	23,380 (10,605)	22,930 (10,401)



Standard/Optional Equipment

	DL200-5	DL200TC-5	DL220-5	DL250-5	DL250TC-5
ENGINE					
Emissions (EPA)	T4	T4	T4	T4	T4
High Pressure Common Rail (HPCR)	•	•	•	•	•
Cooled Exhaust Gas Recirculation (CEGR)	•	•	•	•	•
Diesel Oxidation Catalyst (DOC)	•	•	•	•	•
Selective Catalyst Reduction (SCR)	•	•	•	•	•
Diesel Exhaust Fluid (DEF)	•	•	•	•	•
Fuel Filter with Water Separator	•	•	•	•	•
Coolant Recovery Tank	•	•	•	•	•
Dual Element Dry-Type Air Filter with Evacuator	•	•	•	•	•
Pre Cleaner	•	•	•	•	•
Electronic Engine Control (ECU)	•	•	•	•	•
Auto-Idle (Working to Standby)	•	•	•	•	•
Auto-Shutdown (Time Adjustable)	•	•	•	•	•
Overheat & Low Oil Pressure Engine Protection	•	•	•	•	•
Cooling Fan - Radiator, Variable Speed	•	•	•	•	•
Cooling Fan - Radiator, Automatic Reversible	•	•	•	•	•
Remote Drain Port - Engine Oil	•	•	•	•	•
Block Heater (110V)	■	■	■	■	■
Fuel Filler Pump	■	■	■	■	■
HYDRAULIC					
Variable Displacement Axial Piston Pump	•	•	•	•	•
Closed-Center System	•	•	•	•	•
Pilot Operated Control Valves	•	•	•	•	•
Remote Test Ports	•	•	•	•	•
Remote Drain Port - Hydraulic Oil	•	•	•	•	•
Spring Applied Hydraulic Release Parking Brake	•	•	•	•	•
Auxiliary Hydraulics (3rd Valve)	•	•	•	•	•
Auxiliary Hydraulics (4th Valve)	■	■	■	■	■
Automatic Boom/Lift Kick-Out, Adjustable (In Cab)	•	•	•	•	•
Automatic Return-to-Dig Position, Adjustable	•	•	•	•	•
Boom Float	•	•	•	•	•
Load Isolation System	■	■	■	■	■
ELECTRICAL					
System Voltage - 24V	•	•	•	•	•
Alternator - 24V, 80 Amp	-	-	•	•	•
Alternator - 24V, 85 Amp	•	•	-	-	-
2 x 12V Batteries, 100 AH Capacity, 900 CCA	•	•	•	•	•
Blade Type Fuse Panel	•	•	•	•	•
Main Circuit Breaker	•	•	•	•	•
Light, Work (Halogen): Front (2), Rear (2)	•	•	•	•	•
Light, Headlights (High/Low Beams) (2)	•	•	•	•	•
Light, Stop, Tail & Direction Indicators	•	•	•	•	•
Rotating Beacon	■	■	■	■	■
Hour Meter	•	•	•	•	•
Rearview Camera	■	■	■	■	■
Laptop Service Port	•	•	•	•	•
Self-Diagnostics System	•	•	•	•	•
Telematics	•	•	•	•	•

	DL200-5	DL200TC-5	DL220-5	DL250-5	DL250TC-5
CABIN					
Roof Cover	■	■	■	■	■
Steel, All-Weather & Sound Suppressed	•	•	•	•	•
ROPS (ISO 3471)	•	•	•	•	•
Front & Rear Window with Wiper/Washer	•	•	•	•	•
Tinted Safety Glass	•	•	•	•	•
Visor, Retractable	•	•	•	•	•
Lockable Doors	•	•	•	•	•
Seat - Air Suspension - 2" (51 mm) Seat Belt - Adjustable Height & Recline - Adjustable Fore/Aft - Adjustable Arm Rests	•	•	•	•	•
Seat - Heated	■	■	■	■	■
3" (76 mm) Seat Belt	■	■	■	■	■
Control Stand - Sliding (Fore/Aft)	•	•	•	•	•
Storage	•	•	•	•	•
Mirror, Rear View (1)	•	•	•	•	•
Mirrors, Exterior (2) Heated	•	•	•	•	•
Fully Automatic HVAC with Ambient Temperature Sensor	•	•	•	•	•
Multi-Function LCD	•	•	•	•	•
Cigarette Lighter	•	•	•	•	•
AM/FM Stereo with CD Player & MP3 Port	•	•	•	•	•
Speakers (2)	•	•	•	•	•
Antenna, Roof-Mounted	•	•	•	•	•
Power Socket, 12V	•	•	•	•	•
Beverage Holder	•	•	•	•	•
Hot/Cold Compartment	•	•	•	•	•
Interior Light	•	•	•	•	•
CONTROLS					
Adjustable Steering Column - Tilting - Telescoping	•	•	•	•	•
Throttle Pedal (Accelerator)	•	•	•	•	•
Brake Pedal, Right	•	•	•	•	•
Brake Pedal, Left (Transmission Kick-Out)	•	•	•	•	•
Gear Selector (FNR)	•	•	•	•	•
Joystick Control	•	•	•	•	•
Fingertip Control (3 Lever)	■	■	■	■	■
Switches, Console-Mounted - Starter (Key) - Parking Brake - Pilot Cutoff - Transmission Cutoff - Work Light - Reversible Cooling Fan	•	•	•	•	•
Speed Management	•	•	-	-	-
Traction Control Management	•	•	-	-	-
Power Mode (P, S, E)	•	•	•	•	•
Transmission Mode	•	•	•	•	•
Wiper Control Panel	•	•	•	•	•
Audio Control Panel	•	•	•	•	•

- Standard Equipment
- Optional Equipment
- N/A

Standard/Optional Equipment *Continued*

	DL200-5	DL200TC-5	DL220-5	DL250-5	DL250TC-5
FRAME & DRIVELINE					
Z-Bar Lift Arm	•	–	•	•	–
Z-Bar Lift Arm, High Lift	■	–	■	■	–
Parallel Lift Arm	–	•	–	–	•
Steering Cylinder, Double-Acting (2)	•	•	•	•	•
Transmission, Automatic - Power Shift - (4F/3R Speed)	–	–	•	•	•
Transmission, Hydrostatic - Dual Motor	•	•	–	–	–
Torque Converter	–	–	•	•	•
Differential, Front - Limited Slip	•	•	•	•	•
Differential, Front - Hydraulic Locking	–	–	■	■	■
Differential, Rear - Limited Slip	•	•	•	•	•
Hydraulic Power Steering	•	•	•	•	•
Outboard Planetary Axles	•	•	•	•	•
Fixed Front Axle	•	•	•	•	•
Oscillating Rear Axle	•	•	•	•	•
Parking Brake, Spring Applied Hydraulic Release	•	•	•	•	•
Sealed, Self-Adjusting Brakes	•	•	•	•	•
Tires, 20.5R25 Bias	•	•	•	•	•
Tires, 20.5R25 Radial	■	■	■	■	■
FRAME & DRIVELINE					
Buzzer					
- Engine Oil Pressure	•	•	•	•	•
- Coolant Temperature					
- Transmission Overheat					
Gauges					
- Fuel Level					
- DEF Level					
- Engine Coolant Temperature					
- Transmission Oil Temperature					
- Engine rpm					
- Speedometer					
- Transmission Gear Indicator	•	•	•	•	•
- Battery Voltage					
- ECO					
- Digital Clock					
- Trip Meter					
- Hour Meter					
- Total Operation Time					
- Fuel Consumption					
Warning & Indicator Lights					
- Seat Belt					
- Error Code					
- SCR Warning					
- Check Engine					
- Engine Oil Pressure					
- Engine Pre-Heat Engaged					
- Radiator Coolant Temperature					
- Air Filter					
- Fuel Level					
- DEF Level					
- Water in Fuel					
- Battery Charge					
- Lights (High, Main, Work, Beacon)					
- Direction Signal	•	•	•	•	•
- Emergency Steering					
- Hydraulic Oil Temperature					
- Hydraulic Charge Pressure Warning					
- Hydraulic Pilot Filter					
- Hydraulic Return Filter					
- Transmission Mode					
- Transmission Warning					
- Transmission Lock-Up					
- Transmission Oil Temp					
- Transmission Gear Indicator					
- Brake Fluid Pressure Warning					
- Reverse Fan Indicator					
- Mirror Heat Indicator					
- Parking Brake Indicator					
Back-Up Alarm	•	•	•	•	•

	DL200-5	DL200TC-5	DL220-5	DL250-5	DL250TC-5
OTHER					
Centralized Lubrication	•	•	•	•	•
Handrails & Service Platforms	•	•	•	•	•
Skid-Resistant Steps & Service Platforms	•	•	•	•	•
Drawbar & Pin	•	•	•	•	•
Wheel Chocks	•	•	•	•	•
Rear Fender, Full	■	■	■	■	■
Additional Counterweight <i>*Additional counterweight is standard on all high lift machines.</i>	–	–	■	■	–
Manuals					
- Operation & Maintenance	•	•	•	•	•
- Parts					
- AEM Safety Manual					
Telematics, Three-Year Subscription	•	•	•	•	•
Vandalism Protection					
- Lockable Panels	•	•	•	•	•
- Lockable Fluid Fill Points					
- Anti-Theft Protection (Password)					

• Standard Equipment
 ■ Optional Equipment
 – N/A

DOOSAN STRONG



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DOOSAN



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Request for Quotation
 13 - Equipment

Proc Folder: 575001

Doc Description: ADDENDUM 1 4WD RUBBER TIRED WHEEL LOADER WBUCKET (7019EC15)

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2019-07-12	2019-07-25 13:30:00	CRFQ 0803 DOT1900000125	2

BID RECEIVING LOCATION

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 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Name, Address and Telephone Number: Doosan Infracore North America LLC.
 2905 Shawnee Industrial Way, Suite 100
 Suwanee, GA 30024
 470-865-1585

FOR INFORMATION CONTACT THE BUYER

Crystal G Hustead
 (304) 558-2402
 crystal.g.hustead@wv.gov

Signature X

FEIN # 81-2433879

DATE

7-23-2019

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION:

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DIVISION OF HIGHWAYS, IS SOLICITING BIDS TO ESTABLISH AN OPEN-END CONTRACT FOR A FOUR-WHEEL DRIVE RUBBER-TIRED WHEEL LOADER WITH BUCKET PER THE ATTACHED DOCUMENTS.

INVOICE TO	SHIP TO
DIVISION OF HIGHWAYS EQUIPMENT DIVISION RT 33 83 BRUSHY ROAD CROSSING, PO BOX 610 BUCKHANNON WV26201 US	DIVISION OF HIGHWAYS EQUIPMENT DIVISION 83 BRUSHY FORK RD CROSSING BUCKHANNON WV 26201 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	4WD RUBBER TIRED WHEEL LOADER W/BUCKET	50.00000	EA	\$134,548.47	\$6,727,423.50

Comm Code	Manufacturer	Specification	Model #
22101501	Doosan	2.6 Yard Wheel Loader	DL200-5-US10

Extended Description :
4WD RUBBER TIRED WHEEL LOADER WITH BUCKET

INVOICE TO	SHIP TO
DIVISION OF HIGHWAYS EQUIPMENT DIVISION RT 33 83 BRUSHY ROAD CROSSING, PO BOX 610 BUCKHANNON WV26201 US	DIVISION OF HIGHWAYS EQUIPMENT DIVISION 83 BRUSHY FORK RD CROSSING BUCKHANNON WV 26201 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	OPTIONAL: LAND CLEARING RAKE	50.00000	EA	\$13,004.20	\$650,210.00

Comm Code	Manufacturer	Specification	Model #
22101501	Craig	LAND CLEARING RAKE	CLR-CL

Extended Description :
OPTIONAL: LAND CLEARING RAKE

INVOICE TO	SHIP TO
DIVISION OF HIGHWAYS EQUIPMENT DIVISION RT 33 83 BRUSHY ROAD CROSSING, PO BOX 610 BUCKHANNON WV26201 US	DIVISION OF HIGHWAYS EQUIPMENT DIVISION 83 BRUSHY FORK RD CROSSING BUCKHANNON WV 26201 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	OPTIONAL: LOG AND LUMBER FORKS	50.00000	EA	\$17,520.80	\$876,040.00

Comm Code	Manufacturer	Specification	Model #
22101501	Craig	Log and Lumber Forks	CLLF-2 (C-95374)

Extended Description :
OPTIONAL: LOG AND LUMBER FORKS

SCHEDULE OF EVENTS

Line	Event	Event Date
1	MANDATORY PRE-BID MEETING	2019-07-02
2	VENDOR QUESTION DEADLINE	2019-07-09

SOLICITATION NUMBER: CRFQ DOT1900000125

Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

- Modify bid opening date and time
- Modify specifications of product or service being sought
- Attachment of vendor questions and responses
- Attachment of pre-bid sign-in sheet
- Correction of error
- Other

Description of Modification to Solicitation:

1. To provide answers to vendor questions
2. To publish the pre-bid meeting sign-in sheet

No other changes

Bid opening remains July 25, 2019 at 1:30 PM EST

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ATTACHMENT A

CRFQ 0803 DOT1900000125

ADDENDUM 1

4 WD RUBBER TIRED WHEEL LOADER W/BUCKET

The original language in contract will be listed first with question and answer to follow below.

1. **3.1.1.3** Engine s Operating weight shall be 25,000 pounds' minimum (exclusive of tire ballast).

Question: My loader weighs over 29,900 lbs. ?

Answer: will accept

2. **3.1.1.4** Unit shall have a breakout force of 14,600 pounds' minimum.

Question: My breakout force is over 23,800 lbs. ?

Answer: will accept

3. **3.1.1.5** Overall length (bucket on ground) shall be 24-foot maximum.

Question # 1: My overall length is 25' 3" instead of a max of 24' ?

Question # 2: Our machine has an overall length of 24' 5". Would this be acceptable?

Answer: (Q# 1 will accept (Q# 2 yes)

4. **3.1.1.7** Overall height shall be 10 feet 8 inches to top of cab (maximum).

Question # 1: My overall height is 10' 10" instead of a max of 10' 8" ?

Question # 2: Our machine has an overall height of 10' 11". Would this be acceptable?

Answer: Q# 1 yes Q# 2 yes

5. 3.1.3.2 Engine shall be a minimum power rating of 120 HP (Horse Power).

Question: My horsepower is 158 instead of 120.

Answer: will accept

6. 3.1.4.1 Shall have on-board automated grease lubrication system installed by manufacturer.

Question: Hitachi would request dealer installed lubrication system.

Answer: will accept

7. 3.1.5.4 Loader shall have Axle and Service brake coolers largest available by manufacturer.

Question # 1: My loader does not have axle and service brake coolers.

Question # 2: Would State accept unit with no coolers, if OEM engineering can produce proof that long "roading" will not negatively impact performance or longevity?

Question # 3: Hitachi redesigned these components to internally cool the sump for maximum cooling thus these are not needed and would be redundant.

Answer: Q# 1 Will accept without coolers BUT Differentials shall be warranted for 5-years unlimited hours.

8. 3.1.8.3 Shall have a minimum of (2) two batteries 950 CCA minimum each.

Question: Would the State accept two (2) batteries at 850 CCA?

Answer: yes, will accept

9. 3.1.12.1 Shall have manufacturers standard front and rear with manual Differential lock with wheel spin control.

Question # 1: My standard front and rear differentials are front limited slip and rear conventional. Front and rear limited slip is optional.

Question # 2: Our machine comes standard with a locking front differential and an open rear differential. A limited slip rear differential is an option. Could you please clarify what is mandatory?

Question # 3: Would the State accept both front and rear limited slip differentials? (Standard on our machines)

Question # 4: Hitachi wheel loaders have standard automatic wheel locks not manual per the specification. (John Deere is the only manufacture that has manual).

Answer: (Q #1 will accept your standard) (Q #2 will accept your standard) (Q #3 will accept your standard) (Q # 4 will accept)

10. 3.1.15.4 Hydraulic system relief pressure shall be 3000 PSI minimum.

Question: Would the State accept a system relief pressure of 2,755 PSI?

Answer: yes

11. 3.1.16.1 Tires shall be correct ply and rating grader/loader type front and rear tubeless radials 17.5/R25 size 1-star L-3.

Question: My standard tires are 20.5R/25 instead of 17.5R/25.

Answer: will accept

12. 3.1.17.9 Seat shall be heated cloth type with headrest and independent height and weight adjustment with orange colored seatbelt.

Question # 1: My manufacturer does not install orange seat belts.

Question # 2: Would the State accept a black seatbelt?

Answer: Yes

13. 3.1.17.10 Unit shall have adjustable tilt and telescoping steering wheel.

Question # 1: Would the State accept a just a tilt steering column?

Question # 2: The John Deere 444 K does not have a telescoping steering column available from the manufacturer. It does have a tilting column. Could this specification be changed to a tilting steering column?

Answer: Q#1 and #2 yes will accept

14. 3.1.17.15 Cab shall have factory embedded payload scale.

Question # 1: Would the State accept a payload scale, installed by dealer?

Question # 2: Hitachi partners with Load Rite scales and would be dealer installed not factory installed.

Answer: Yes, will accept dealer installed

15. 3.1.17.16 Cab shall have factory installed rear view camera and radar object detection system.

Question: Would the state consider a unit without radar object detection?

Answer: Yes

16. 3.1.18.5 Shall have one (1) Class 1 LED beacon, amber mounted on machine.

Question: Would the State consider a beacon that is not LED?

Answer: No

17. 3.1.19.9 One (1) complete set of replacement filters shall be provided with each unit upon delivery.

Question: Full set of filters. Should a full set of filters include the DPF filter?

Answer: will Change To read: 3.1.19.9 One (1) complete set of service filters shall be provided with each unit upon delivery excluding the DPF Filter.

18. 3.1.20.1 The general-purpose bucket shall be 2.00 cubic yard minimum. And 2.5 cubic yard maximum.

Question: My bucket for this size machine is 3.0 cu. yd. instead of 2.0 cu. yd. minimum and 2.5 cu. yd. maximum.

Answer: will accept 3.0 yard

19. 3.1.20.6 Bucket Linkage type shall be Z-bar type or equal.

Question: My quick change bucket style machine uses parallel linkage instead of z-bar for better visibility when using buckets, log forks, lumber and pallet forks, grapples and other attachments.

Answer: will accept parallel linkage

20. 6.1 Delivery Time: A completed pilot model for inspection must be provided within **120** working day(s) after receipt of the pilot model order, by the successful vendor. Vendor shall deliver standard orders within **180** working days after standard orders are received Working day is defined as any week day, Monday thru Friday, excluding Federal and State Holidays. Vendor shall ship all orders until a minimum delivery quantity is met.

Question: We request 150 working days for the pilot model.

Answer: will change to 150 for pilot model

**PRE-BID CONFERENCE
SIGN IN SHEET**

Request for Quotation Number: CRFQ 0803 DOT 190000125 Date: 7/2/19

Project Description: 4 wd Rubber Tired Wheel Loader

PLEASE PRINT LEGIBLY. THIS INFORMATION IS ESSENTIAL TO CONTACT THE ATTENDEES IN A TIMELY MANNER. FAILURE TO DO SO MAY RESULT IN DELAYS IN YOUR COMPANY GETTING IMPORTANT BID INFORMATION.

Firm Name: State Equipment, Inc
 Firm Address: 560 New Goff Mountain Road
Charleston, WV 25313
 Representative Attending: Seth Gunder
 Phone Number: 304-776-4405
 Fax Number: 304-776-4409
 Email Address: Seth@stateequipment.com

Firm Name: Leslie Equipment Co
 Firm Address: 2018 Linton Way
Plant Valley WV 26554
 Representative Attending: Bo Kester
 Phone Number: 304-534-5454
 Fax Number: 304-534-5888
 Email Address: kesterbo@lec1.com

Firm Name: Doosan Infracore North America
 Firm Address: 2905 Sherwood Ind. Way
Suwanee, GA 30024
 Representative Attending: Matt Gasser
 Phone Number: 281.381.6322
 Fax Number: 860.210.4402
 Email Address: Matt.gasser@doosan.com

Firm Name: Leslie Equipment Co
 Firm Address: 19 Goff Crossing Drive
Charleston WV 25313
 Representative Attending: Stephen Lewis
 Phone Number: 304-561-8280
 Fax Number: 304-204-1811
 Email Address: lewisstephen@lec1.com

Firm Name: Road Equipment Company
 Firm Address: 500 River Road
park Nitro, WV 25143
 Representative Attending: Joseph Argabrite
 Phone Number: 304-533-0275
 Fax Number:
 Email Address: JArgabrite@RoadEquipment.com

Firm Name: NEWLON INTERNATIONAL SALES LLC
 Firm Address: PO Box 1334 / 16 WARD RD
ELKINS, WV 26241
 Representative Attending: BEAU NEWLON
 Phone Number: 304-636-4561
 Fax Number: 304-636-7155
 Email Address: BEAU@NEWLONWV.COM

PRE-BID CONFERENCE
SIGN IN SHEET

Request for Quotation Number: CRFQ 0803 DAT 1900000125 Date: 7/2/19

Project Description: 4WD Rubber Tired Wheel Loader

PLEASE PRINT LEGIBLY. THIS INFORMATION IS ESSENTIAL TO CONTACT THE ATTENDEES IN A TIMELY MANNER. FAILURE TO DO SO MAY RESULT IN DELAYS IN YOUR COMPANY GETTING IMPORTANT BID INFORMATION.

Firm Name: Rish Equipment Co.
Firm Address: 100 Helicopter Loop
Bridgeport, WV 26330

Representative Attending: Miranda M. Novak
Phone Number: 724-415-7777
Fax Number: 304-842-6126
Email Address: mnovak@rish.com

Firm Name: Walker Machinery
Firm Address: _____

Representative Attending: Eric Ramey
Phone Number: 304-389-4190
Fax Number: 304-949-7272
Email Address: eramey@walker-cat.com

Firm Name: WEST VIRGINIA TRACTOR
Firm Address: P.O. BOX 473
CHARLESTON WV 25322

Representative Attending: GARY GRADY
Phone Number: 304-346-5301
Fax Number: 304-346-5305
Email Address: wvtractor@msn.com

Firm Name: Leslie Equipment
Firm Address: P.O. BOX 1225
Beaver WV 25813

Representative Attending: Brad Hayhurst
Phone Number: 304-255-1525
Fax Number: 304-252-9806
Email Address: hayhurstBRAD@lecl.com

Firm Name: Ridd Equipment Company
Firm Address: 500 Park Road
P.O. Box 610
MARTIN, WV 25143

Representative Attending: Paul Jacobs
Phone Number: 304-546-5258
Fax Number: 304-755-7590
Email Address: rsjacobs@riddequip.com

Firm Name: Anderson Equipment Co
Firm Address: 1 Andys Way
S. Charleston, WV 25

Representative Attending: Bert Smith
Phone Number: 304-614-5811
Fax Number: 304-366-2714
Email Address: bsmith@andersonequip.com

PRE-BID CONFERENCE
SIGN IN SHEET

Request for Quotation Number: CRFQ 0803 DOT 1900000125 Date: 7/2/19

Project Description: 4WD Rubber Tired Wheel Loader

PLEASE PRINT LEGIBLY. THIS INFORMATION IS ESSENTIAL TO CONTACT THE ATTENDEES IN A TIMELY MANNER. FAILURE TO DO SO MAY RESULT IN DELAYS IN YOUR COMPANY GETTING IMPORTANT BID INFORMATION.

Firm Name: _____
Firm Address: _____
Pam Hall
WV DOT
Representative Attending: _____
Phone Number: _____
Fax Number: _____
Email Address: _____

Firm Name: _____
Firm Address: _____
Tommy Campbell
WV DOT
Representative Attending: _____
Phone Number: _____
Fax Number: _____
Email Address: _____

Firm Name: _____
Firm Address: _____
MARCIA LEE
DOT
Representative Attending: _____
Phone Number: _____
Fax Number: _____
Email Address: _____

Firm Name: _____
Firm Address: _____
Representative Attending: _____
Phone Number: _____
Fax Number: _____
Email Address: _____

Firm Name: _____
Firm Address: _____
Tina Lewis
Representative Attending: _____
WV DOT
Phone Number: _____
Fax Number: _____
Email Address: _____

Firm Name: _____
Firm Address: _____
Representative Attending: _____
Phone Number: _____
Fax Number: _____
Email Address: _____

STATE EQUIPMENT, INC.

SETH GARDNER
"THE MAN"

CELL: 304-533-6020
OFFICE: 304-776-4405
FAX: 304-776-4409
EMAIL: SETH@STATEEQUIPMENT.COM
WWW.STATEEQUIPMENT.COM



560 NEW GOLF MOUNTAIN RD
CROSS LANES, WV 25313



Walker

Cecil I. Walker Machinery Co.
P.O. Box 2427
Charleston, WV 25328
Office: (304) 949-8400
Cell: (304) 389-4180
Fax: (304) 949-7272
eramey@walker-cat.com
www.walker-cat.com

Eric Ramey
General Sales Manager



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Bo Kesler

Corporate

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Pleasant Valley, WV 26554
keslerbo@lec1.com
www.lec1.com



Office: 304-534-5454
Fax: 304-534-5888
Cell: 304-642-7931



Bert Smith
Sales Representative

Fairmont Branch
2007 Ruskin Drive
Pleasant Valley, WV 26554
bsmith@andersonequip.com
Phone: 304-366-3075
Fax: 304-366-7214
Mobile: 304-614-5811
www.andersonequip.com



"Run with the Best"

Steve Lewis

Sales Representative

19 Goff Crossing Drive
Cross Lanes, WV 25313
lewisstephen@lec1.com
www.lec1.com



JOHN DEERE

Office: 304-204-1818
Fax: 304-204-1811
Cell: 304-542-0433



"Run with the Best"

Brad Hayhurst

Sales Manager

P.O. Box 1220
Beaver, WV 25813
hayhurstbrad@lec1.com
www.lec1.com



Office: 304-255-1525
Fax: 304-929-2557
Cell: 304-673-8642

OFFICE (304) 346-5301
(800) 640-8245



**WEST VIRGINIA
TRACTOR COMPANY**
CONSTRUCTION, MINING, MUNICIPAL & INDUSTRIAL EQUIPMENT

www.wvtractor.com

GARY W. GRADY
PRESIDENT
Cell: (304) 549-6068

P. O. BOX 473
214 VIRGINIA ST. W.
CHAS., WV 25322/25302

wvtractor@msn.com

JOSEPH ARGABRITE
PRODUCT SUPPORT REPRESENTATIVE

(304) 755-7788 Office
(304) 533-0275 Cell
jargabrite@ruddequipment.com

Rudd

RON JACOBS
SALES REPRESENTATIVE

(304) 755-7788 Office
(304) 561-8790 Cell
rjacobs@ruddequipment.com

Rudd

MIRANDA M. NOVAK
Finance Manager & Sales Coordinator

KOMATSU



100 Heilport Loop
Bridgeport, WV 26330
Office: 304-842-3511 x.6518
Fax: 304-842-6126
Cell: 304-641-2562
mnovak@rish.com

"Safety Focused - Support Driven"
www.rish.com



Matt Gansser
National and Key Accounts Sales Manager

**Doosan Infracore
North America LLC**

2905 Shawnee Industrial Way
Suwanee Georgia 30024
T - 678-714-6439
M - 281-381-6322
matt.gansser@doosan.com



DOOSAN

Official Partner of Major League Baseball

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.

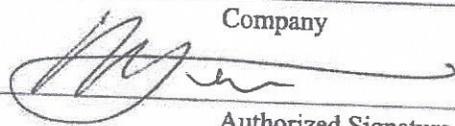
Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

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.

Doosan Infracore North America LLC.

Company


Authorized Signature
JULY 26, 2019

Date

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

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	DL200-5-US10 2020 Year	50	\$134,548.47	\$6,727,423.50
2	Optional: Log and Lumber Forks	Craig CLLF-2 (C-95374) 2019	50	\$ 17,520.80	\$876,040.00
3	Optional: Land Clearing Rake	Craig CLR-CL (C-95375) 2019	50	\$ 13,004.20	\$650,210.00
Total Bid Amount					\$8,253,673.50

Vendor Information

Company Name: Doosan Infracore North America, LLC.

Contract Manager: David Dixon

Address: 2905 Shawnee Industrial Way, Suite 100

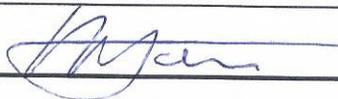
Suwanee, GA 30024

Phone: 470-865-1585

Fax:

Email: david.dixon@doosan.com

Signature:



West Virginia Ethics Commission



Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

"Business entity" means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

"Interested party" or *"Interested parties"* means:

- (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
- (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
- (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

"State agency" means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of *W. Va. Code* § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: ethics@wv.gov; website: www.ethics.wv.gov.

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 §81-5-3) 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: Doosan Infracore North America, LLC.

Authorized Signature: _____

Date: 6-13-2019

State of Georgia

County of Gwinnett, to-wit:

Taken, subscribed, and sworn to before me this 13th day of June, 2019

My Commission expires April 17, 2021

AFFIX SEAL HERE

NOTARY PUBLIC

Angela Kyler

Purchasing Affidavit (Revised 01/19/2018)



West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: DINA Address: 2905 Shawnee Industrial Way, Suite 100
Suwanee, GA 30024

Name of Authorized Agent: N/A Address: _____

Contract Number: _____ Contract Description: _____

Governmental agency awarding contract: _____

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

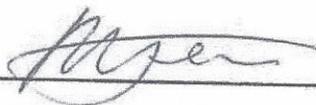
Check here if none, otherwise list entity/individual names below.

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:  Date Signed: 6-13-2019

Notary Verification

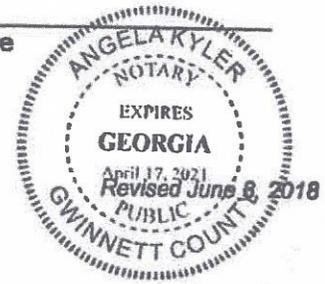
State of Georgia, County of Gwinnett:

I, Edward Heejeon Song, 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 13th day of June, 2019


Notary Public's Signature

To be completed by State Agency:
Date Received by State Agency: _____
Date submitted to Ethics Commission: _____
Governmental agency submitting Disclosure: _____



DOOSAN

RUN STRONG AND REST ASSURED.

DOOSAN PROTECTION PLUS EXTENDED WARRANTY

The Protection Plus® extended warranty plan from Doosan Construction Equipment allows you to purchase additional protection on the full machine, powertrain or powertrain plus hydraulics. It goes well beyond the scope of the standard Doosan warranty.

Up to 72 different plans are available to give you up to a total of 60 months or 7,500 hours of protection against defects in materials and/or workmanship.



**PROTECTION
PLUS**  *Extended Warranty*

What's in it **FOR YOU?**

PEACE OF MIND:

For a small investment, you can protect your Doosan® machine with additional warranty coverage that minimizes your repair costs. If machine issues do occur, you know in advance that you are covered, which allows you to avoid unplanned expenses. It not only gives you an extended sense of security and peace of mind, it makes good business sense.

RISK MANAGEMENT:

By providing a comfortable shield of protection against repairs due to failures in materials or workmanship, an extended warranty greatly decreases your exposure to financial risk.

NO DEDUCTIBLE:

Your Protection Plus policy covers the costs of parts, labor, with no deductible required.

HIGHER RESALE VALUE:

If you sell the machine, any remaining Protection Plus coverage can be transferred to the new owner for a minimal fee. A machine with Protection Plus coverage – even if the policy is expired – will likely be perceived by a potential purchaser as having added value because of the superior care and maintenance provided by the original owner – you.

BACKING FROM DOOSAN:

Doosan has confidence in its products, and we stand behind them with the Protection Plus extended warranty, which is fully backed by Doosan. With Protection Plus coverage on your equipment, you can be as confident in your machine as we are.



About Your **PROTECTION PLUS COVERAGE**

HOW DOES THE PROTECTION PLUS EXTENDED WARRANTY DIFFER FROM THE STANDARD DOOSAN WARRANTY?

Your new Doosan machine already includes a standard factory warranty of 12 months or 1,500 hours (2,000 hours for articulated dump trucks), whichever comes first. It's included at no extra cost. It's an assurance from us that your Doosan equipment will perform as promised, and it's backed by our decades of construction equipment manufacturing and leadership in the industry. The Protection Plus warranty goes a step further than the standard warranty, allowing you to purchase 24 to 60 total months, or 2,000 to 7,500 total hours, of warranty protection for the powertrain, powertrain plus hydraulics or the full machine.

The Doosan Protection Plus extended warranty provides an easy way to protect your cash flow from unplanned expenses and allows you an easy way to customize the coverage to fit your needs.

- Includes factory-backed parts, labor coverage, as specified by Doosan
- Coverage is honored at any authorized Doosan dealer
- \$0 deductible
- Protection Plus is transferable when you sell or trade your machine

You may purchase Protection Plus up to 12 months after taking delivery of your Doosan machine.

WHEN DOES THE EXTENDED WARRANTY EXPIRE COMPARED TO A STANDARD WARRANTY?

Time periods include the original standard warranty of 12 months. For example, a 24-month Protection Plus plan provides an additional 12 months of coverage beyond the standard warranty's 12-month time period, for a total of 24 months.



About Your PROTECTION PLUS COVERAGE

WHICH DOOSAN MACHINES ARE COVERED BY THE PROTECTION PLUS EXTENDED WARRANTY?

Protection Plus coverage is available for any new, never-before-sold Doosan machine, or currently owned machines that were purchased new within the last 12 months.

WHAT IS A PROTECTION PLUS FULL MACHINE WARRANTY?

A full machine warranty provides coverage for all covered components as specified by Doosan, subject to the exceptions listed by Doosan.

WHAT ISN'T COVERED BY THE PROTECTION PLUS EXTENDED WARRANTY?

The Protection Plus extended warranty does NOT cover the following items:

- Attachments
- Maintenance items, such as oil, filters and batteries
- Miscellaneous items, such as lamps and bulbs
- Rental and downtime expenses
- Wear items, such as tires and tracks

HOW MUCH DOES PROTECTION PLUS COVERAGE COST?

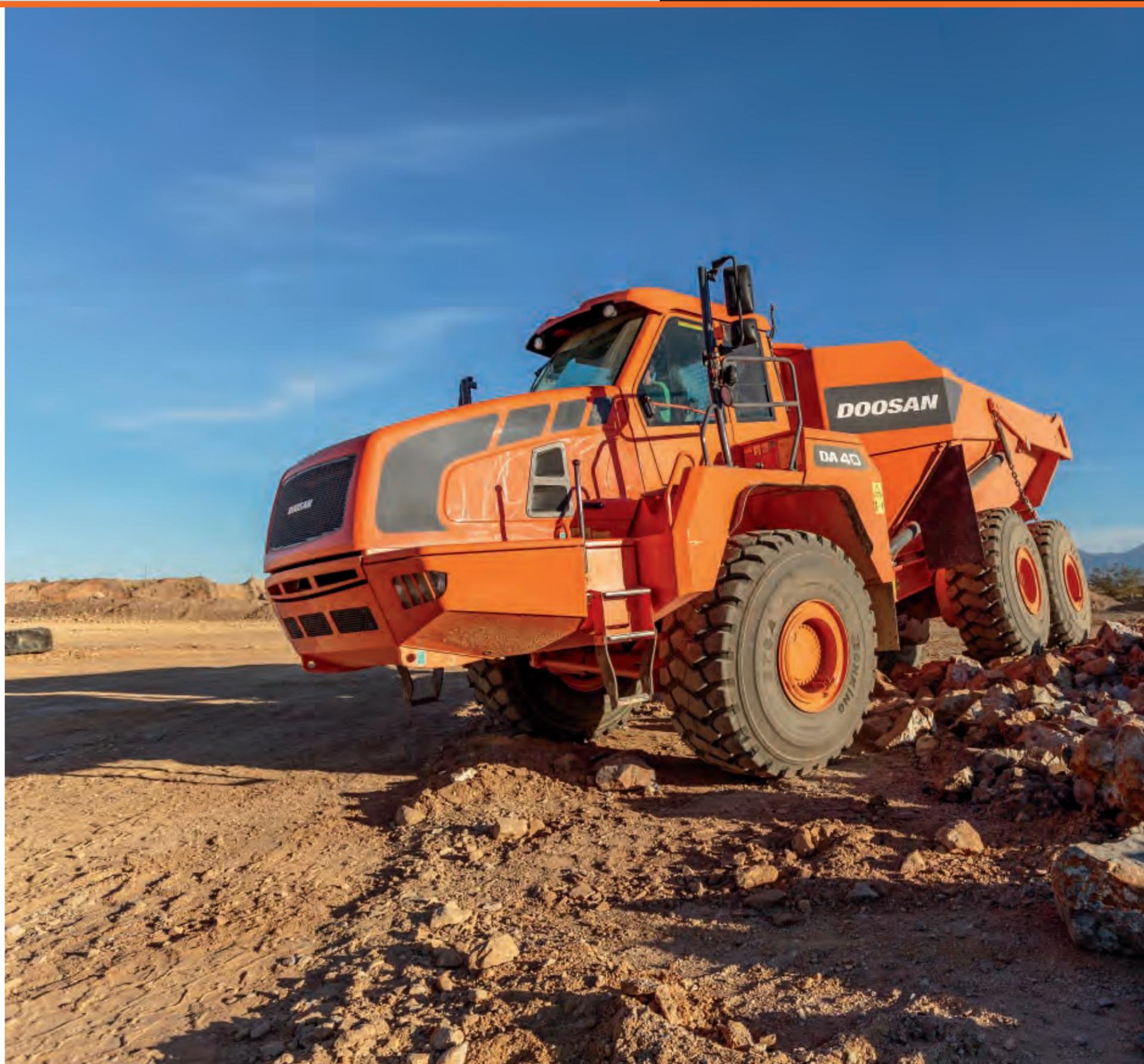
The cost of your Protection Plus extended warranty varies both by machine type and length of coverage desired. Your Doosan dealer can provide a quote and advise you on the cost of the Protection Plus plan you are interested in.

WHO BACKS THE PROTECTION PLUS PROGRAM?

It's backed by Doosan and administered by the entire network of Doosan dealers. Service is provided only by qualified Doosan technicians.

WHO DO I CONTACT AND WHERE DO I GO TO GET EXTENDED WARRANTY SERVICE?

Simply contact the Doosan dealer nearest to you. A machine covered by the Protection Plus warranty can be serviced by any Doosan dealer in the U.S., Canada or Oceania.



About Your PROTECTION PLUS COVERAGE

WHAT WILL DOOSAN DO IF THE PRODUCT FAILS?

Doosan will repair or replace any part or component that fails because of defects in materials or workmanship.

WHICH MACHINE COMPONENTS ARE NOT COVERED BY THE PROTECTION PLUS WARRANTY?

Depending on whether you purchase a full machine, powertrain or powertrain plus hydraulics plan, the components covered vary. Your Doosan dealer can review the differences in coverage with you at any time.

ARE THERE ANY CONDITIONS OR LIMITATIONS ON THE EXTENDED WARRANTY?

Protection Plus customers are required to perform maintenance on the covered machine at regular intervals. Also, Doosan will not be liable for any damage to the machine caused by the use of non-Doosan fluids or filters.

COVERAGE OPTIONS

The Doosan **PROTECTION PLUS** extended warranty program offers you the following powertrain, powertrain plus hydraulics and full machine plans beyond the terms of the standard warranty:

HOURS	24 MONTHS	36 MONTHS	48 MONTHS	60 MONTHS
2,000	✓	✓	✓	✓
3,000	✓	✓	✓	✓
4,000	✓	✓	✓	✓
5,000	✓	✓	✓	✓
6,000	✓	✓	✓	✓
7,500	✓	✓	✓	✓

For more information on coverage plans, pricing and benefits, work with your local Doosan dealer.



What's covered? **POWERTRAIN COVERAGE**

ENGINE:

- Camshaft
- Camshaft bearings
- Camshaft drive gear
- Charge air cooler
- Connecting rods and bearings
- Crankshaft bearing and gear
- Crankshaft including front and rear crankshaft seals
- Cylinder head/head gasket
- Cylinder liners
- EGR system manifold
- Electronic engine control module
- Engine block
- Front and rear engine seals
- Front damper
- Injection pump and gasket
- Injection nozzles
- Intake and exhaust manifolds and gaskets
- Oil pan and gasket
- Oil pump
- Piston and rings
- Pressure/temperature sensors and sending units
- Ring gear and flywheel
- Rocker arm cover and gasket
- Thermostats
- Timing gear cover
- Turbocharger and gaskets
- Valve cover and gasket
- Water pump and gasket

TRANSMISSION/DIFFERENTIAL/ HYDROSTATIC:

- Axle housing
- Axles and differentials
- Clutch housing
- Control valves for propel and swing functions only (not dig functions)
- Differential housing
- Differential pinion gear/ring gear
- Drive axle hub
- Drive shaft support bearing
- Driveshaft with universal joints
- Electronic control valves
- Final drive and axles
- Final drive pinion
- Final drive planetary gears
- Hydraulic drive/travel motor
- Hydraulic drive pump
- Hydraulic transmission control valves
- Hydrostatic/hydraulic pump drives
- Hydrostatic motor
- Hydrostatic transmission charge pump
- Hydrostatic transmission pump
- Internal transmission control linkage
- Planetary gear carrier
- Propel motor, pump, brakes and control valves
- Pump and valve controller
- Reverser with control valve
- Splitter drive
- Swing motor and brake
- Swing gearbox and bearings
- Torque converter
- Torque converter pump
- Transfer drive
- Transmission case
- Transmission gear, bearing and shaft
- Transmission pump
- Travel and swing sections only of main control valve
- Travel control valve
- Turntable bearing
- Wet park brakes
- Wet service brakes
- Wet steering brakes
- Wet steering clutches



POWERTRAIN PLUS HYDRAULICS COVERAGE

All components listed under powertrain, plus the following components:

HYDRAULIC COMPONENTS:

- Accumulator and related relief valve
- Brake accumulator
- Brake pressure sensor
- Brake pump, brake valve
- Control and load holding valves
- Cylinder packing kits
- Differential lock valve
- Fan pumps and motors
- Hydraulic cylinders
- Hydraulic motors
- Hydraulic oil cooler
- Hydraulic pumps
- Hydraulic reservoir
- Hydraulic valves*
*Hydraulic hoses and piping; excludes rubbed, ripped, torn, cut or pinched failures.
- Locking pin cylinder
- Pilot controls
- Pressure reducing valves
- Steering pump
- Steering valves and cylinders
- Unloading valve



FULL-MACHINE COVERAGE

All components listed under powertrain and powertrain plus hydraulics, plus the following components:

ENGINE:

- Air intake hose
- Cold start enrichment systems
- Diesel exhaust fluid tank and dispensing system
- DPF
- Engine components covered after emissions warranty
- Engine mounts and supports
- Engine oil lines
- Engine speed controls and linkages
- Fan and fan drive
- Filter mount
- Fuel lines
- Fuel tank
- Fuel transfer pump and gasket
- Oil filler tubes
- Pressure/temperature sensors and sending units
- Pulleys
- Radiator
- Sensors, solenoids and wiring harnesses used in these systems
- Water piping
- Water pump

STEERING:

- Cross relief valve
- Priority valve
- Secondary steering system components

BRAKES:

- Brake accumulator
- Brake pump
- Brake valve
- Pressure reducing valve
- Unloading valve

TRANSMISSION/DIFFERENTIAL/HYDROSTATIC:

- Accumulator and related relief valves
- Control rods
- Differential lock valve and associated parts
- Disconnect levers and handles
- Filler tubes
- Filter screens
- Levers and pedals
- Oil cooler
- Pneumatic valves
- Sending units and sensors
- Shift control linkage
- Undercarriage roller and idler seals and bearings
- Undercarriage tensioner*

*Undercarriage exclusions: sprockets, tracks, pads, bolts and chains.

ELECTRICAL:

- Alternator
- Electronic joystick
- Electronic motors
- Factory installed electronic controllers
- Gauges
- Horn
- Indicators
- Instrument
- Sensors
- Solenoid valves
- Starter
- Starter solenoid
- Switches
- Voltage regulator

*Wiring harnesses; Excludes rubbing, chafing, loose or corroded connections.

FACTORY HEAT AND AIR CONDITIONING:

- Accumulator
- Clutch and pulley
- Compressor
- Condenser
- Dryer
- Evaporator
- Expansion valve
- Heater core
- Hoses*
- Seals and gasket
- Temperature control programmer and valves

*Excludes rubbed, ripped, torn, cut or pinched failures.

OTHER:

- Bucket linkage
- Engine frame
- Excavator arm and linkage
- Excavator boom
- Loader boom
- Mainframe
- Track frames



ITEMS NOT COVERED UNDER PROTECTION PLUS COVERAGE

MAINTENANCE

The Protection Plus plan does not cover scheduled maintenance service items such as lubricants, oil filters, fuel filters, air filters, batteries, tune-ups or coolants.

RENTALS

Protection Plus warranties do not cover downtime expense during repairs or equipment rental charges.

DAMAGE

Protection Plus plans do not cover failures caused by carelessness, accidents, improper operation, transportation, storage, unapproved modification or use of unauthorized attachments.

EXTRA EXPENSES

Your Protection Plus extended warranty does not cover extra expenses such as part freight, cleanup, shop supplies, tools, diagnostic or troubleshooting time, loss of pay or other consequential matters.

ATTACHMENTS

Protection Plus coverage does not cover any attachments that were purchased with the machine.

WEAR ITEMS

Protection Plus plans do not cover wear items such as tires, tracks, batteries, pins, bushings, shims, sprockets, ground engagement tools, bucket teeth, cutting edges or any failure or breakage caused by wear.

MISCELLANEOUS ITEMS

Protection Plus plans do not cover items such as lamps, bulbs, wiper blades, radios, radio components, mirrors, brackets, clamps, fittings, mud flaps, door handles, hinges, seats or windows.

TERMS AND CONDITIONS

During the applicable period of the "Protection Plus Plan," the authorized Doosan dealer shall repair or replace, at the option of Doosan, without charge for parts and labor, any component of the Doosan machine which fails because of defects in material or workmanship except as otherwise provided below. The owner of the protected machine agrees to provide the dealer from which the Doosan machine was purchased with prompt written notice of any defects covered by the "Protection Plus Plan" and to allow a reasonable time for replacement or repair. Doosan may, at its option, request the return of failed parts to its factory.

Protection Plus does not cover extra expenses such as parts freight, cleanup, shop supplies, tools, diagnostic or troubleshooting time, loss of pay or other consequential matters. The owner also agrees that travel time of mechanics or transportation of the Doosan machine to the servicing dealer is not covered. The owner is responsible for the travel cost. The "Protection Plus Plan" does not cover tires, belts or other trade accessories or attachments not manufactured by Doosan. The owner shall rely solely on the warranty, if any, of the respective manufacturers thereof. It does not cover the replacement of scheduled service items such as oil filters, gaskets and other high wear or normal replacement items, nor does it cover damages resulting from abuse, neglect, accidents, alterations, use of the Doosan machine with any accessory or attachment not approved by Doosan, air flow obstructions, or failure to maintain or use the Doosan machine according to the instructions applicable to it. In order to ensure coverage under the "Protection Plus Plan," the owner must submit proof that maintenance intervals have been followed. It is the obligation of the owner to provide such verification when submitting warranty claims. In addition, Doosan will not be liable under the "Protection Plus Plan" for any defect or damage which is caused by the use of non-Doosan fluids or filters. Refer to the Operation & Maintenance manual and Parts manual for the correct Doosan fluids and filters.

THE "PROTECTION PLUS PLAN" IS IN LIEU OF ALL OTHER WARRANTIES. DOOSAN DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE REMEDIES PROVIDED UNDER THE PLAN ARE EXCLUSIVE. IN NO EVENT SHALL DOOSAN OR THE AUTHORIZED DOOSAN DEALER BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, LOSS OR INTERRUPTION OF BUSINESS, LOST PROFITS, OR LOSS OF MACHINE USE, WHETHER BASED ON CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY, STATUTE OR OTHERWISE, EVEN IF DOOSAN OR THE AUTHORIZED DOOSAN DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. DOOSAN RESERVES THE RIGHT TO DENY THE SALE OF COVERAGE ON ANY MACHINE AT ANY TIME.

PLAN FOR LONG-TERM SUCCESS WITH DOOSAN EQUIPMENT.

ASK YOUR DEALER FOR PROTECTION PLUS
EXTENDED WARRANTY



**PROTECTION
PLUS**  Extended Warranty

DOOSAN

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Doosan Infracore North America, LLC

NEW DOOSAN PRODUCT STANDARD WARRANTY

Doosan Infracore North America, LLC. (DINA) warrants the DOOSAN Hydraulic Excavator and Wheel Loader, hereinafter referred to as Machine to be free from defects in material and workmanship. If any part of the Machine fails as a result of a defect in material and/or workmanship within twelve (12) months or one thousand five hundred (1,500) hours, (whichever occurs first), from the first in service date as defined by DINA warranty registration records, the failed part will be replaced free of charge with labor (per DINA Labor Time Guide) by the nearest authorized DINA dealer during normal business hours at the place of business thereof.

This warranty does not apply to the following:

- (1) Damage or defects caused by accident, misuse, negligence, natural calamity or improper maintenance.
- (2) Damage or defects caused by using other than Doosan Infracore North America, LLC (DINA) genuine parts or installing attachments to equipment not authorized in writing by DINA.
- (3) Changes, alterations or modifications to equipment or any of its components/parts by other than DINA authorized dealers, which is the sole judgment of DINA, which affects the performance, stability or purpose for which it was manufactured.
- (4) Slight defects, which generally do not affect the stability or reliability of the machine.
- (5) Maintenance such as but not limited to engine cleaning, replacement of consumable parts, lubrication, brake adjustment, and other recommended maintenance procedures as defined in the Machine Operator and Maintenance Manual, etc.
- (6) Consumable articles, such as but not limited to oil, grease, fan belt, batteries, gaskets, fuses, brake or clutch lining, fuel filter, tires, cables, carbon brushes, bulbs, glass, and other similar parts.
- (7) Wear items such as but not limited to cutting edges, bucket teeth, undercarriage components and other ground engaging components except for breakage as a result of a defect in material or workmanship.
- (8) Transportation or towing, loading or unloading charges related to the failed Machine to or from the nearest location of the authorized DINA Dealer.
- (9) Cost of a rental or loaner equipment.
- (10) All Labor related to diagnostics of any defective part or component.
- (11) Freight charges incurred as a result of shipment of the replacement warranty part or component to the registered user of the machine.

This warranty is expressly in lieu of any other warranties, expressed or implied, including any warranty of merchantability or fitness for a particular purpose.

The liability of DINA under this warranty is expressly limited to the provisions specified above and in no event shall DINA incur any liability (including liability for general, special, incidental or consequential damages, economic or moral loss, arising out of any failure of Machine) which is not expressly assumed by DICEA under this warranty. In all matters DINA's decision is final.