

Certain specification(s) are based on engineering calculations and are not actual measurements. Specification(s) are provided for comparison purposes only and are subject to change without notice. Specification(s) for your individual Doosan equipment will vary based on normal variations in design, manufacturing, operating conditions, and other factors. Pictures of Doosan units may show other than standard equipment.

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DIPBE-00-2110

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**DOOSAN**

Construction Equipment

# DL250A-7M DL250-7M



Photos may include optional equipment

Powered by **Innovation**



# BRISK AND BRIGHT, NEEDS NO DECORATION

## DL250A-7M and DL250-7M

A Brisk Worker Who Prepares All the Way,  
The Versatile Instrument to Harmonize in Every Work






To deliver a great performance, you need a powerful instrument. Structural balance, proper tension, preparatory tuning, right combination of durable material and craftsmanship. DL250A-7M and DL250-7M are formed based on functionality and performance. Whether to perform in fast rhythm or to end up on a long-term work, it will be the flexible instrument in a range of conditions.

DL250A-7M and DL250-7Ms' optimum usage ensures you to ideally prepare for daily operations on various duties. Dual line-up of mechanical and electronic engine gives you the further choices to fit your need. Available various attachments to be tuned into various field of works. It is the sum of our skills and understanding which continues Doosan's legacy and make the most of it.

Finely tuned, especially robust and efficient, DL250A-7M and DL250-7M are tightly stretched to perform at the highest level. Ready to bring you unparalleled productivity and efficiency.



## Doosan is here to offer the right instrument and services for you to successfully conduct your business

### A Flexible and Versatile Performer

Dual line-up of mechanical and electronic engine gives you the further choices to fit your need. Various attachments including high lift and counterweight option prepared for various field of works. Power, and athletic balance of Superior hydraulic system harmonized with features to work efficiently.

### Meet with Efficient Features

Do more with less fuel. Working modes and power modes provided for constantly changing working conditions. Adjusts the mode depending on the situation, for either fuel efficiency or performance. Lock-Up function to fully and effectively deliver the whole engine power.

### To Be Shaped in Long-Lasting Form

DL250A-7M and DL250-7M were developed with longevity front of mind. Obsessive engineering and countless tests have proved DL250-7M and DL250-7M's superior quality and durability to make an equipment you can count on to cope with the most demanding work environments. Its functional and intuitive in-and-out design delivers you comfort and total control.

# WE ARE BACK WITH NEW FEATURES

All the nice features of previous model  
bodily succeeded, even nicer things to come.



## **NEW 8-INCH MONITOR FOR REAR-VIEW CAMERA (OPTIONAL)**

Large and bright LCD monitor to view rear surroundings for safe operation. Wide angle Rear-view camera integrated into the radiator grill, offering seamless design and protection.

## **LSD (LIMITED SLIP DIFFERENTIAL) (OPTIONAL)**

Various axle option available for different terrain conditions to meet your needs.

## **STRENGTH AND INTELLIGENCE**

With tremendous lift height and capacity, along with enough torque to bite into the toughest materials, Doosan wheel loaders go a step beyond scooping, carrying and loading. It's your ticket to making harder work easier, longer days more enjoyable, and every minute more productive and profitable.



**AUTOMATIC REVERSE FAN  
(DL250-7M STANDARD, DL250A-7M OPTIONAL)**

The optional reversible functionality of the fan, which blows air in the opposite direction, allows self-cleaning of the cooling units.

**CABIN VISIBILITY**

Improved visibility to the left and right bottom section of the front windshield for easy positioning of front wheels.

**INCREASED OPERATOR COMFORT**

The new spacious cab offers an operator-friendly environment with top-class all-round visibility. It centers around a high comfortable seat.

**ENHANCED COUNTERWEIGHT**

Reinforced standard counterweight with additional counterweight option

**DOOSANCONNECT® TELEMATICS SERVICE  
(OPTIONAL)**

Offering 'preventive maintenance service' based on machine operating data. Providing an expert level consultation to dealers. Functioning as fleet management tool for the customers.

**NEW CLUSTER AND KEYPAD**

Intuitive gauge panel and keypad enable easy access to machine settings and maintenance data. All switches and operating mechanism integrated to improve operational convenience.

**ENHANCED LIS (LOAD ISOLATION SYSTEM)  
(OPTIONAL)**

LIS absorbs the impact with the movement of lifting arm, cutting off the shock not to be transferred to cabin and body. Enhancing the balance, productivity and operator comfort.



# THE FIXER IN ALL FIELD

## Accelerate Your Productivity With Complete Solution, Almighty DL250A-7M and DL250-7M

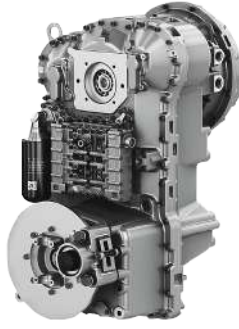
DL250A-7M and DL250-7M are a particularly versatile equipment, which is designed for all round performance. Two right opportunities with mechanical and electrical engines are available to further your choices. Featured with enhanced hydraulic system and powerful torque, with the perfect balance of maneuverability ensures you to handle any picky environment.

Perfect integration of power and intelligence. DL250A-7M and DL250-7M s' intelligent automatic system is ready to help you achieve the performance you want with the fuel savings you need. Lock-Up system is fitted in the electronic torque to hand over engine's whole power without hydraulic slip. Both in order to attain maximum efficiency and productivity.

Maximize productivity by combining with a range of durable attachments. Specialized in each of the needed area, all attachments effectively perform a variety of tasks and increase your productivity.







#### **FULL AUTO TRANSMISSION**

The electronic powershift transmission is particularly smooth. Gear ratios perfectly spaced to give optimal speed. Giving comfort and delivering excellent traction in every working condition. Built-in electronic controls enhanced productivity and durability. Transmission has three modes of operation, 'Manual', '1-4 Automatic', '2-4 Automatic'. 'Automatic' mode provides self regulative shift for all gears and 'Semi-Automatic' mode provides automatic option after the first acceleration and gear shift.

#### **DOOSAN ENGINE (DL250A-7M)**

DL250A-7M give high performance through in-house engine. Outputs of 127kw, one of the highest in class. High power and impressive torque range enables to precisely deliver the stable working speed. Reliable and robust mechanical engine provides high resistance to exterior contamination. Perfectly harmonized with the hydraulic system and provides strong power delivers maximum productivity and profitability.

#### **SUPERIOR AND SUSTAINABLE POWER (DL250-7M)**

Doosan DLo6 engine delivers a superior performance while still meeting the Tier III emissions regulations. The engine features excellent power and torque characteristics with 4 valves per cylinder and electronic control. Increased torque and a generous torque reserve allow efficient use of power by the hydraulic system.











#### LIMITED SLIP DIFFERENTIAL

The front and rear axles are fitted with limited-slip differentials as standard. This automatically ensures the maximum tractive effort and easy driving over soft and swampy ground. It also reduces the risk of skidding and prevents excessive tire wear.



#### IMPROVED LIS (LOAD ISOLATION SYSTEM)

In loaded traveling, the impact on the front could be transferred to the body, may give rise to equipment damage and driver uncomfortableness. LIS option absorbs tremor and minimizes swaying movement of lifting arm while the equipment carries the load. Ultimately enhancing the durability of front structure and operator's comfort.

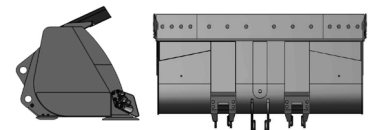


#### Z-BAR KINEMATIC

Z-bar design is the best kinematic structure for bucket application. Maximum force can be transferred when bucket is parallel to the ground, resulting in high breakout force.

#### 1. AGGREGATE BUCKET OPTION

Designed rehandling bucket lines to give faster and more efficient bucket fill. Fortified bucket options provided for handling aggregate material.



1

#### 2. ADDITIONAL COUNTERWEIGHT OPTION

300kg Additional counterweight can be assembled with standard counterweight. Increases tipping load of the machine to raise.



2

#### 3. HIGH LIFT (OPTIONAL)

High Lift Arm is available in addition to Standard Arm to satisfy customers' various applications.



3

#### 4. QUICK COUPLER CONFIGURATIONS (OPTIONAL)

General purpose buckets or pallet fork are available in coupler configurations for quick and easy change between attachments.



4

#### 5. HYDRAULIC POWER STEERING

The hydraulic power steering system ensures smooth steering even in the low engine speed ranges. Prepared with steering control valve.

#### 6. ADAPTIVE POWER MODE (DL250-7M)

Three different power modes give you precise control over the powertrain. Adjust the mode depending on the working situation, for either fuel efficiency or performance, with only a few tabs.





# COMPETE WITH PERFECT IN-AND-OUT QUALITY

**Up to Any Challenges,  
With Reliability Equipped in Standard**

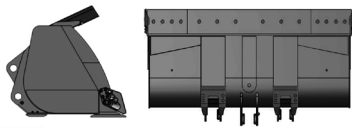
With you for the long run. Powerful, poise and durable DL250A-7M and DL250-7M are here to support you with the best components for the job. Obsessive engineering and countless tests have been done for high performance and to cope with most demanding work environments.

Excellent performance with added durability and quality on structure components. Computer assisted design technique applied to remote possibilities in hydraulic components and frame structures. Doosan is more than ready to provide an especially robust equipment that is optimally prepared for use for almost any construction challenge.









### 1. REINFORCED BUCKET

The lower and side panels of the bucket have been reinforced with additional plates as standard. Reinforcement applied at both sides and at lower panel.

1



### 2. RADIATOR GRILL WITH STEEL STRUCTURE

The radiator grille with its aerodynamic steel structure increases air flow which facilitates cooling and the maintenance process.

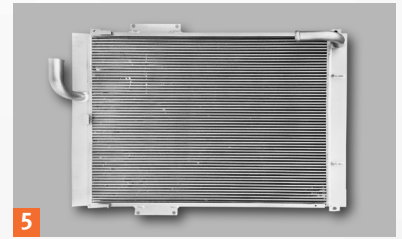
2



3



4



5





### 3. PROPELLER SHAFT

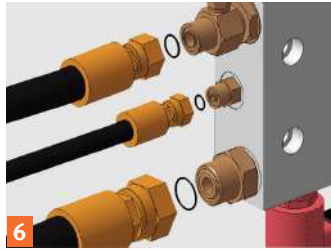
A protective cover has been installed to protect the oil seal from dust, foreign objects and premature wear. Robust steel suspension provides excellent transmission of power and ensures reliable stability.

### 4. IMPROVED ENGINE DURABILITY BY TECHNOLOGICAL IMPLEMENT

Water separator in fuel to prevent engine damage. Large capacity forced air cleaner removes over 99% of airborne particles, reducing the risk of engine contamination and lengthen the cartridge change intervals.

### 5. LARGE CAPACITY TRANSMISSION OIL COOLER

The large capacity transmission oil cooler ensures durable and stable operation of transmission.



### 6. ORFS-ALL PORTS

To ensure perfect oil tightness, all ports, are fitted with ORFS type. Even in the low pressure ports such as pilot line and pressure line are ORFS type.

### 7. REMOTE AXLE BREATHER

Increased the length of front axle breather for prevention of pollution from particle matter. Added additional remote type axle breather on rear axle.

### 8. RADIATORS MOUNTED ON RUBBER MOUNTS

The radiators are mounted on rubber mounts to effectively with stand vibrations.

### 9. APPLIED MORE RIGOROUS QUALITY STANDARD

All key components meet the increased new quality standard. Applying Doosan single platform, which verified in advanced market.











# THE AMBIENCE OF LUXURY SEDAN

## Technology and Luxury Distilled Into Simplicity

All details matter. Some of our best ideas are not from the high technology, but from deep understanding of our customers' work needs. A space of refinement, with authentic materials and craftsmanship featured to arouse your senses.

Simple and intuitive features to help you to center on important work. With functions and operating information minimized into a intuitive gauge panel, enable you to focus on what you really need to see. Intelligent assist system and uncluttered design accentuates operator to concentrate on work without being distracted.

Enjoy sheer individuality, and luxury. Personal space with completely re-designed cabin interior with climate control systems, air suspension seat and various convenient features makes an outstanding comfort.





1

### 1. SPACIOUS CABIN COMFORT

Refined interior with enhanced legroom and extendable storage space guarantees a serene ride to you. A more orderly interior Equipped with high-class designed upholstery and thoroughly changed comfort accessories. This ensures operator to have a clear and uncluttered workplace at all times.



2

### 2. ALL AROUND VISIBILITY

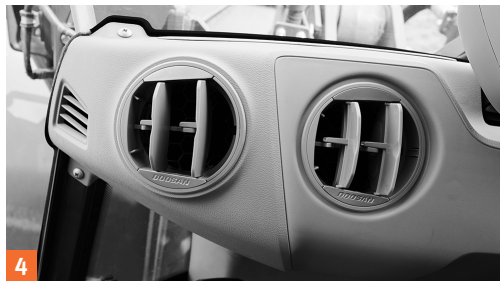
Improved visibility to the Left and right bottom section of the front windshield for easy positioning of front wheels.



3

### 3. SMALL DETAILS ADD THE FEELING OF REFINEMENT

Operationally re-designed brake pedal and non-slip floor mat equipped. Heating and ventilation, Air conditioning system upgraded for pleasant environment. USB charger and sunglass case is also equipped for additional comfort. Rear sun visor is also equipped for UV protection.



4

### 4. AIR CONDITIONING

The high performance of air conditioning system provides an air flow which is adjusted and electronically controlled according to the conditions. A double air filter protects the operator's environment.



5

### 5. REAR VIEW MONITOR (OPTIONAL)

Optional rear-view camera increases safety by giving visibility beyond operator's sight. Additional LED lighting system attached on each side for the clear identification.



7

### 6. STEERING COLUMN

Joystick enables united and intuitive control of your wheel loader. The steering column features both tilting and telescopic functions.

### 7. CONTROL LEVERS (OPTIONAL)

The control levers are very precise. Different options are available to match what the operator is accustomed to. Auxiliary hydraulic control is in operators' fingertips with the New Thumbwheel Joystick.



8

### 8. CENTRAL GAUGE PANEL

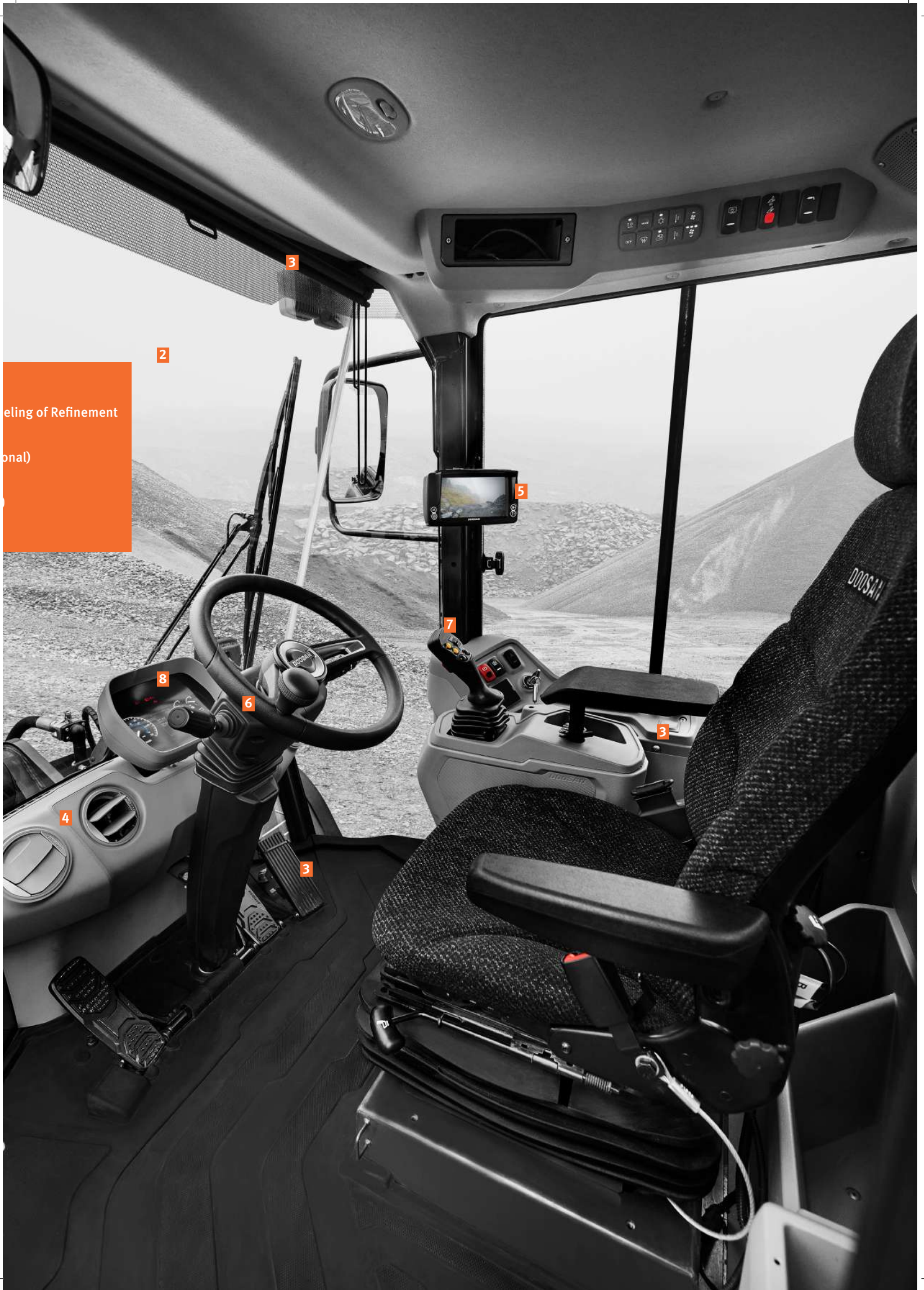
A new gauge panel put essential information right in front of the driver. The compact central monitor clearly shows the perfect overview of the machine status and warning messages at a single glance.

- 2. All Around Visibility
- 3. Small Details Add the Feeling
- 4. Air Conditioning
- 5. Rear View Monitor (Optional)
- 6. Steering Column
- 7. Control Levers (optional)
- 8. Central Gauge Panel





eling of Refinement  
onal)





# ALWAYS THE WAY IT WAS, EASY MAINTAINANCE

## Keep Working, Keep Gaining

Extended maintenance intervals increase uptime and reduce costs. DL250A-7M and DL250-7M facilitate features for machine to operate in best condition at long intervals by ensuring short and easy maintenance procedure.

Features to allow you to get the most out of each working day. With helpful features including grouped filters and greasing points. Multiple hand rails and platforms offered for safe maintenance access, checks can be carried out faster and machine uptime will increase.

Thoroughly concentrate on your main work. We are there for you, always connected. Familiar and intuitive DoosanCONNECT service provides you the operational data in an hourly cycle.

### **AUTOMATIC REVERSE FAN (DL250-7M STANDARD, DL250A-7M OPTIONAL)**

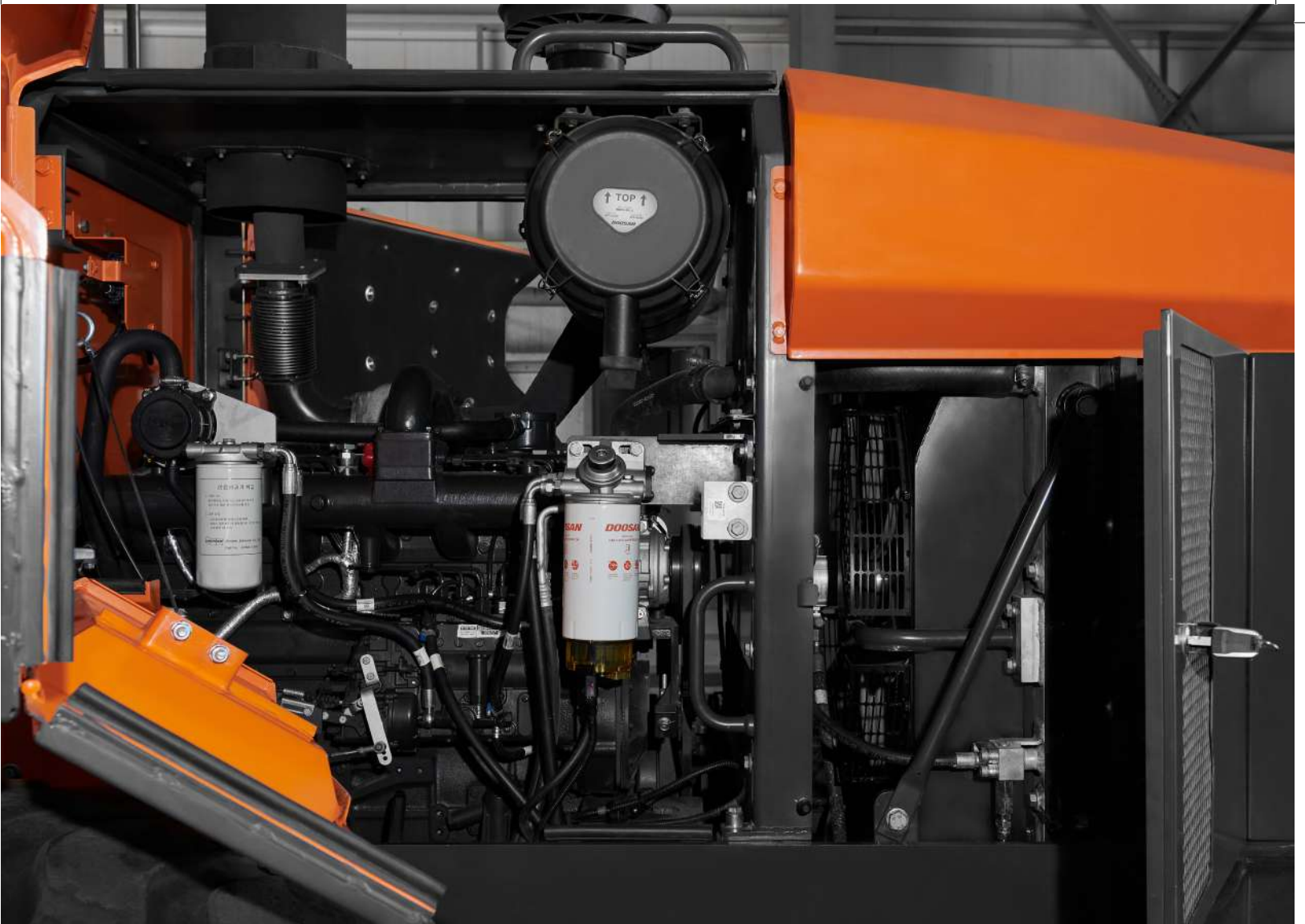
Tolerant for a range of conditions including dusty, sturdy, harsh environments. Electronically controlled cooling fan regulates the temperature of the vital components. The optional reversible functionality of the fan, which blows air in the opposite direction, allows self-cleaning of the cooling units. Reducing the risk of contamination and lengthen the change intervals.

### **AIR INTAKE**

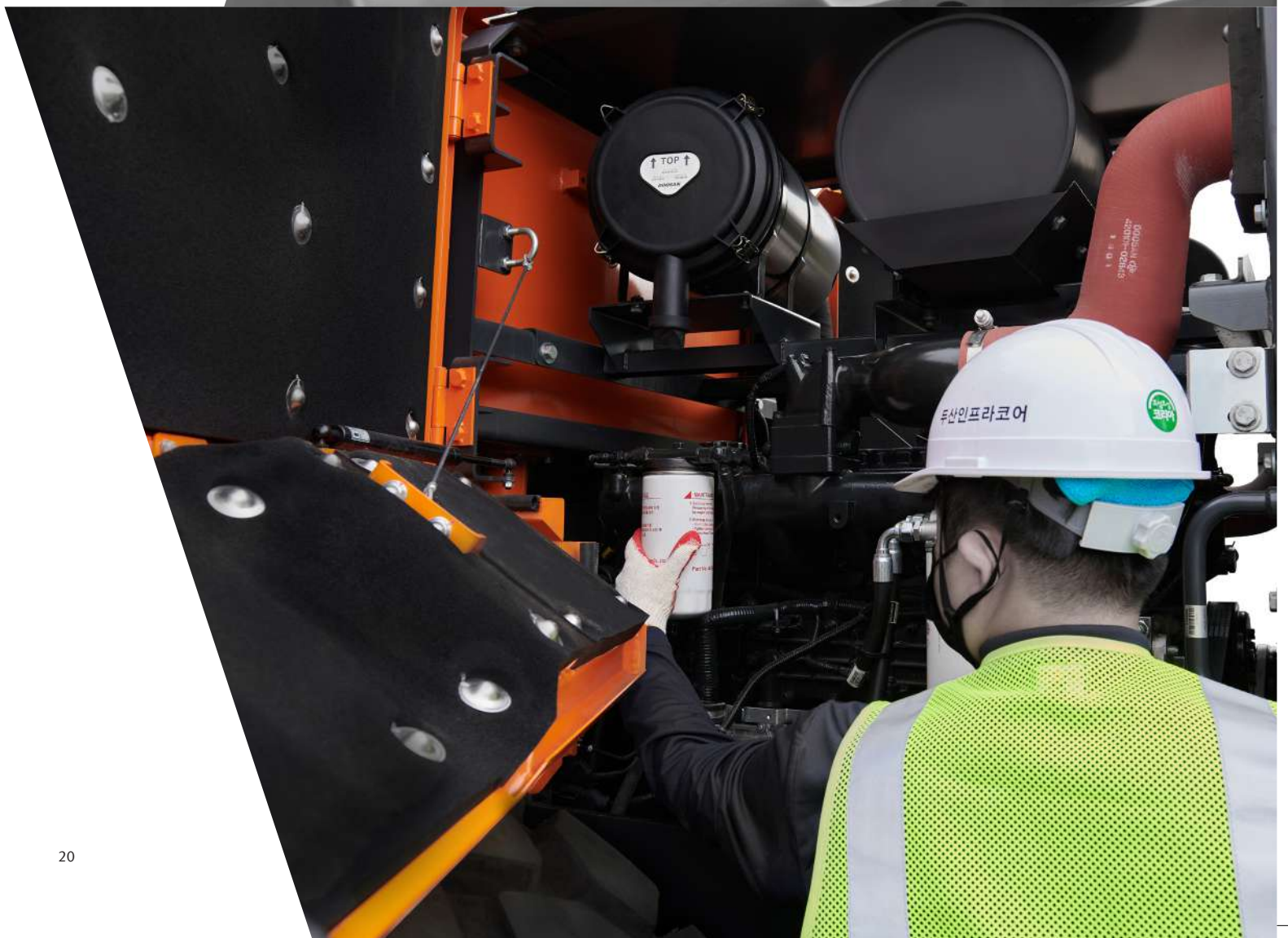
Maintenance-free cyclone air pre-filter separates more than 99% of particles 20 microns in size and larger. Cleaning and cartridge replacement are only needed at long intervals. Extending the air filter's lifetime, the pre-filter also ensures better combustion and a longer engine lifetime.

### **SAFE ACCESS**

To facilitate access and mobility on the machine, multiple platforms and hand-rails ensure that the operator always has a firm support to hold on to and 3-point contacts.









**TRIPLE-ELEMENT AIR FILTER**

The forced-air cleaner removes 99% of particles and is backed up by a turbo pre-filter. Cleaning and cartridge replacement are only needed at long intervals.

**SINGLE LAYER COOLING  
MODULE RADIATOR**

Applied Single layer cooling module structure. Simple structure made easy for cleaning.







#### **TRANSMISSION FILTER**

Transmission filters located in easy reach. Like the rest of the machine's service components, can be checked from ground level.

#### **WATER SEPARATOR**

Water separator comes standard to allow the engine to perform at its' top condition regardless of fuel quality.

#### **REMOTE GREASING LUBRICATION PORTS**

Front pins can be lubricated from the outside of the machine. Enable to skip the unnecessary procedure of struggling to reach the unapproachable lubrication ports, including crawling under the machine.

#### **ENGINE OIL / COOLANT DRAIN PORT**

Remote type drain ports makes it easier to replace engine oil/coolant.

#### **HVAC FILTER ACCESS**

Heating, Ventilation and Air Conditioning system is positioned on the outside of the cabin for easier maintenance. Allowing quick replacement on filters and enhancing daily maintenance check easier.

#### **DOOSANCONNECT® TELEMATIC SERVICE**

Upgraded DoosanCONNECT provides fuel consumption data, error code, parts replacement interval information. Via DoosanCONNECT service, you can always monitor the operating data, anytime or anywhere. Optimized for routinely check to prevent machine troubles and down time.







# DoosanCONNECT® Telematics Service (OPTIONAL)

**TELECOMMUNICATIONS** Data flow from machine to web



## TELEMATICS SERVICE TERMINAL

Telematics Service terminal is installed to machine / connected to EPOS™



## TELECOMMUNICATION

GPS, EPOS™ data is sent to designated server by GSM, Satellite telecommunication



## DOOSAN TELEMATICS SERVICE WEB

Doosan, Dealer, Customer can easily monitor the GPS, EPOS™ data from Core Telematics Service web

**TELEMATICS SERVICE BENEFITS** Doosan and dealer support customers to improve work efficiency with timely and responsive services

### CUSTOMER

- Improve work efficiency
- Timely and preventive service
- Improve operator's skills by comparing work pattern
- Manage fleet more effectively

### DEALER

- Better service for customers
- Provide better quality of service
- Maintain machine value
- Better understanding of market needs

### DOOSAN

- Responsive to customer's voice
- Utilize quality-related field data
- Apply customer's usage profile to developing new machine

**FUNCTIONS(WEB/APP)** Doosan Telematics Service provides various functions to support your great performance



• GPS



• Fuel information



• Preventive maintenance



• Operation hours



• Fault code/warning



• ADT Productivity

• Reports

	FUNCTION	EXCAVATOR	WHEEL LOADER	ADT
GPS	· Location · Geo-fence	All models	All models	All models
Operation hours	· Daily, Weekly, Monthly report	All models	All models	All models
Operation hours	· Total operation hours · Operation hours by mode	All models Tier 4 only	All models	All models
Maintenance parts	· Preventive maintenance by item replacement cycle	All models	Tier 4 only	All models
Fault code/ Warning	· Fault code · Machine Warnings on Gauge Panel	All models	Tier 4 only	All models
Fuel information	· Fuel level · Fuel consumption	All models Tier 4 only	Tier 4 only	All models
Dump capacity	· Dump tonnage · Count of Work Cycle	N/A	N/A	All models



# GLOBAL PARTS NETWORK

## QUALITY-PROVEN MAIN COMPONENTS

Doosan provides fast and precise worldwide delivery of genuine Doosan parts through its global PDC (parts distribution center) network.



### GLOBAL NETWORK

The global network of the GPDC (Global Parts Distribution Center) maximizes its supply rate by making sure that each center is stockpiled with all the critical parts required for businesses in its area. The network also minimizes the time and costs required for parts delivery by positioning PDCs close to major markets around the world. Doosan PDCs communicate with customers in their time zone, informing them that they are open for operation, and deliver parts to them as early as possible.

### THE GLOBAL PARTS DISTRIBUTION CENTER NETWORK

PDCs had been set up as shown below, including Mother PDC in Ansan, Korea. The nine other PDCs include one in China (Yantai), Four in USA (Seattle and Atlanta, Suwanee, Miami), two in Europe (Germany and the UK), one in the Middle East (Dubai) and one in Asia (Singapore).



<b>PDC BENEFIT</b>					
	<b>Distribution Cost Reduction</b>	<b>Maximum Parts supply rate</b>	<b>Shortest distance/ time parts delivery</b>	<b>Real-time service support</b>	<b>Minimum downtime</b>

# ATTACHMENTS

Aggregate bucket is the most commonly used bucket in the construction equipment market and is designed mainly for use in heavy construction but also used in low density mining and quarry application.

## Spill guard

Add spill guard prevent material spill

## Side bar

Shape increases to hold material better

## Side cutter

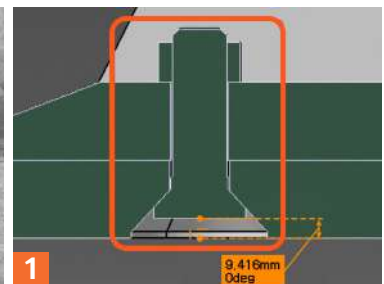
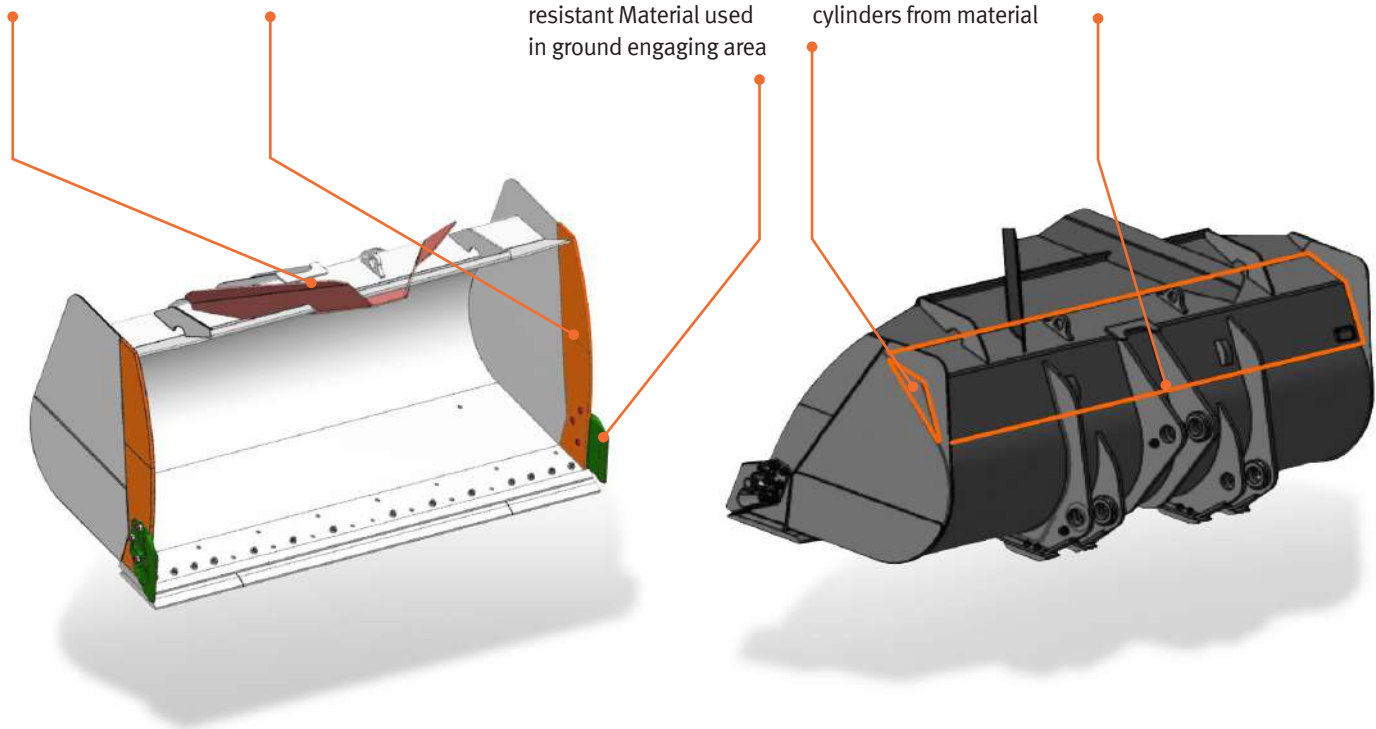
Add side cutter as standard to wear resistant Material used in ground engaging area

## Side plate

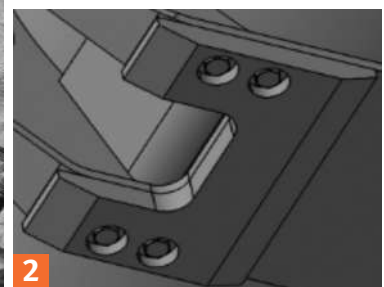
Increase side plates to protect bucket cylinders from material

## Back bone

Add back bone (Bax type support)



**1**  
**PLOW BOLT FOR CHANGEABLE PARTS**  
 New plow bolt will be applied on tooth adaptor and cutting edge

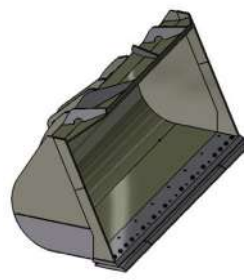


**2**  
**CHANGEABLE BOTTOM PLATES**  
 Operator can change wear plate easily

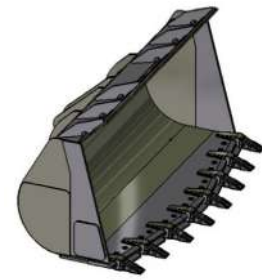




General Purpose



Light Material



V-Shape Rock

## BUCKETS

	DLGP25	DLLM25	-
WEIGHT [kg]	965	1,300	-
CAPACITY [m <sup>3</sup> ]	2.4	3.0	-



## QUICK COUPLER

	DLQC25
WEIGHT [kg]	390



## PALLET FORK

	DLPF25
WEIGHT [kg]	1,025
LENGTH [inch]	60
OPERATING WIDTH [mm]	450~2,030



## LIFTING ARM

	DLA25
WEIGHT [kg]	610
LOAD [kg] (REACH [m])	2,000 (3.5) / 1,400 (4.6) / 1,000 (5.7)



General Purpose

General purpose grapples are an all-round grapple for handling and sorting entire trees or for grabbing single stems.



Tropical

Tropical timber grapples are very wide with two separate clamping arms to hold large, heavy items securely, principally intended for handling large diameter and high density tropical type timbers.



Sorting

Sorting type grapples have relatively long and straight tines so the grapple can be easily filled when loading from stacks or sorting bunkers. Both the Unloading and the sorting grapple can be fitted with a hydraulic heel/kick out.

## LOG GRAPPLE

	General Purpose	Tropical	Sorting
WEIGHT (kg)	1,500	1,700	1,500
LOG DIA. Ø (mm)	315	1,000	1,300

# TECHNICAL SPECIFICATION (DL250A-7M)

## ENGINE

The high performance Doosan D1146 6 cylinder, direct injection, turbo charged, air-air intercooler engine offers low fuel consumption and low exhaust emissions, which are well below the requirements of the Phase II legislation

-GROSS SAE J1995

### Rated Power

---

127 kW(169 HP) @ 2,200 rpm (SAE J1995, gross)

### Max Torque

---

70 kgf.m (687 N.m) @ 1,300 rpm

### Displacement

---

8,710 cc (531 cu.in)

### Bore x stroke

---

∅ 111 x 139 mm

3 stages Air cleaner including a very efficient pre-cleaner, main and safety elements.

### Battery

---

System voltage : 24 V

Quantity : 12 V x 2

Capacity (AMP) : 100 Ah

### Starter power

---

24 V / 6.0 kW

### Alternator output

---

24 V / 80 A

## AXLES

The front and rear axles with planetary hub reductions are built on the base of very reputed components. Fitted as standard, the front and rear limited slip differentials, ensure the traction is optimal in all circumstances.

### Type

---

Fully floating planetary-type

### Limited slip Differential (front and rear)

---

30 %

### Oscillation angle

---

+/- 11°

### Brake

---

Dual circuit multi-plate wet discs.

Hydraulic actuation with pump and accumulator.

The sintered metal brake discs extended discs service intervals : increased three times

A spring applied and hydraulically released parking brake is mounted on the transmission shaft.

## TRANSMISSION

“Full Power Shift” transmission. It can be used in manual or automatic modes.

This transmission is based on components having excellent worldwide reputations. It is equipped with a modulation system allowing soft gear shifting and inversion of travel direction. Safety devices also protect the transmission of bad operations. The gear and direction shifting is operated by a single lever to the left of the steering wheel. A travel direction control is also mounted on the hydraulic joystick. (Optional)

The transmission can be de-clutched by the operation of brake pedal to increase the power available to the hydraulic pumps. A safety device prevents the starting of the engine when not in neutral.

### Torque converter

---

Type : Single stage, one phase,

Stall ratio : 3.01

### Travel speed, kph

---

Forward : 7.1 · 11.9 · 23.4 · 36.4 (1/2/3/4)

Reverse : 7.5 · 12.5 · 24.5 (1/ 2/ 3)



## HYDRAULIC SYSTEM

The hydraulic system uses tandem vane pumps with automatic wear compensation.

Pilot actuation with standard single lever.

Automatic arm kick-out is standard.

All of hydraulic lines are equipped with special seals (ORFS)

### Max flow main

---

268 / 140 / 42 l/min (70.8 / 37.0 / 11.1 gal/min)

### Working Pressure

---

200 bars

### Pressure of the pilot circuit

---

35 bars

### Filtration capacity on the return line

---

10 microns

### Loading cycles time

---

Lifting speed (loaded) : 5.7 seconds

Dumping speed (loaded) : 1.3 seconds

Lowering speed (empty) : 3.5 seconds

## OPERATOR'S CABIN

The modular cabin allows excellent visibility in all directions. The optimal ventilation is obtained by numerous ventilation outlets. Touch buttons control the air re-circulation air conditioning and heating systems. The air of the cabin is filtered.

All necessary information for the operator are centralized in front of operators.

The main functions are actuated via switches located on a console at the right of the operator. Generous storage places are well located. The cabin, mounted on viscous element and equipped with an air suspended seat, offers a better comfort for the operator.

**Access door : 1**

**Emergency exits : 2**

The cabin conforms ROPS ISO 3471 and  
FOPS : ISO 3449

**Guaranteed external noise level Lwa**  
(following ISO 6395) 108 dB(A)

**Guaranteed internal of cabin noise level Lpa**  
(following ISO 6396) 74 dB(A)

## STEERING

The steering system is a load sensing type with a flow amplifier and a priority valve.

### Steering angle

---

40°

### Oil flow

---

140 l /min(32 gal/min) @ 2,200 rpm, high

### Working pressure

---

180 bars

### Steering cylinders (2)

---

bore x stroke :70 x 425 mm

Emergency steering system with hydraulic pump driven by electric motor. (Optional)

## LIFTING SYSTEM

The lifting system with two cylinders and Z configuration is designed for the toughest jobs. The breakout force is very important and the bucket movements are fast.

The bucket angles are well kept in good positions on all the range of bucket movement.

### Lifting cylinders (2)

---

bore x stroke : 140 x 790 mm

### Bucket cylinders (1)

---

bore x stroke : 160 x 515 mm

## MAINTENANCE

Maintenance is easy due to excellent access.

The radiator fan swivels to aid cleaning.

The transmission is electronically controlled. An error coding system allows easy diagnosis of the systems and proper intervention

**Engine (oil) - 21 ℓ (5.5 US gal)**

**Radiator (cooling liquid) - 32.7 ℓ (8.6 US gal)**

**Fuel - 235 ℓ (61.7 US gal)**

**Hydraulic oil - 140 ℓ (36.8 US gal) - ST**

**Gear box and torque converter - 40 ℓ (10.5 US gal)**

**Front axle - 35 ℓ (9.2 US gal)**

**Rear axle - 23 ℓ (6.0 US gal)**

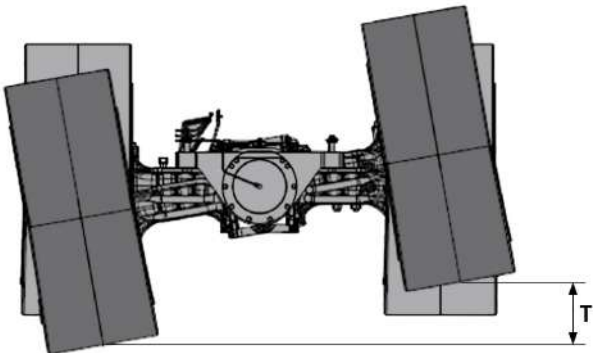
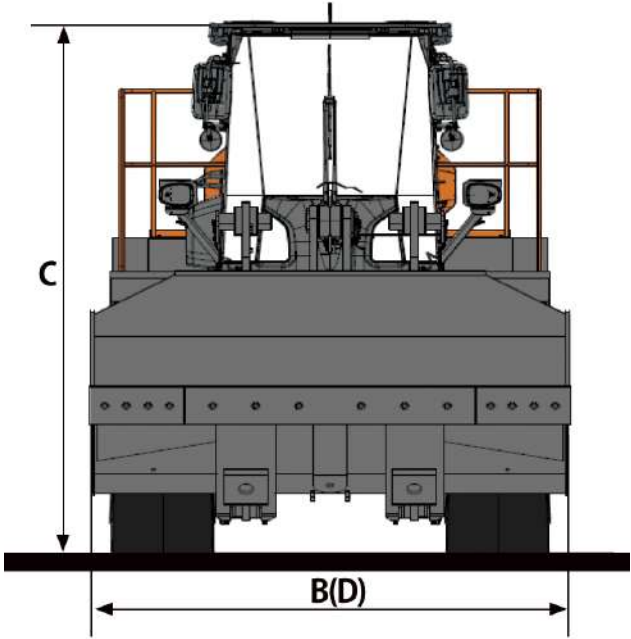
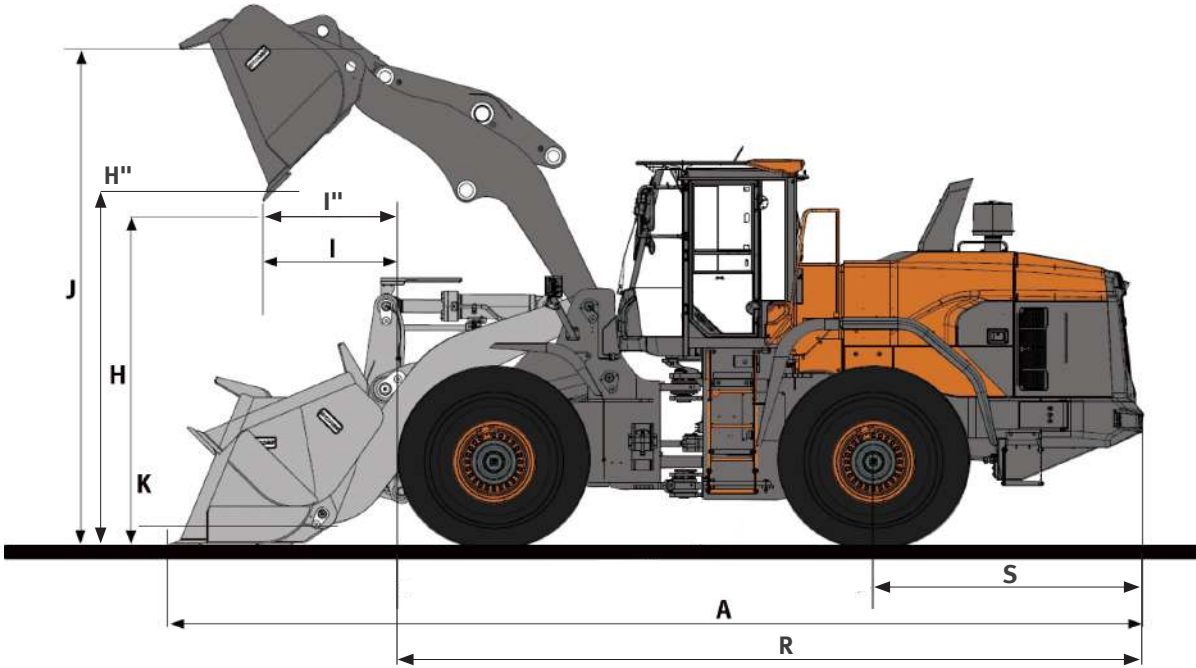
# OPERATIONAL DATA (DL250A-7M)

BUCKET TYPE			General purpose				High Lift Arm
BUCKET MOUNT			PIN ON	PIN ON	PIN ON	PIN ON	
Configuration	Unit	Teeth	Bolt-on edge	Teeth	Bolt-on edge		
Capacity heaped ISO/SAE	m <sup>3</sup>	2.4	2.5	3.0	3.1		
Bucket width	D mm	2,740	2,740	2,838	2,838		
Breakout force	kN	120	111	102	95		
Static tipping load (straight)	kg	11,029	10,776	10,639	10,484	-1,725	
Static tipping load (at full turn)	kg	9,722	9,499	9,378	9,241	-1,519	
Dump height (at 45°) <sup>1)</sup> (at fully raised)	H(H") mm	2,715	2,795	2,600	2,680	+450	
Dump reach (at 45°) <sup>1)</sup> (at fully raised)	l(l") mm	1,145	1,075	1,260	1,190	-45	
Dump height (at max. dump) (at max. reach) <sup>1)</sup>	mm	685	785	535	635	+30	
Dump height (at max. dump) (at max. reach) <sup>1)</sup>	mm	1,490	1,455	1,560	1,520	+420	
Digging depth	mm	75	70	75	70	65	
Height at bucket pivot point	J mm	3,850	3,850	3,850	3,850	+450	
Max. tilt angle at carry position	K deg	48	48	48	48	51	
Max. tilt angle at fully raised	M deg	59	59	59	59	61	
Max. tilt angle on ground	deg	42	42	42	42	43	
Max. tilt angle at max. reach	deg	59	59	59	59	58	
Max. dump angle at max. reach	deg	65	65	65	65	60	
Max. dump angle on ground	deg	64	64	64	64	63	
Max. dump angle at fully raised	L deg	48	48	48	48	45	
External radius at bucket edge	Q mm	6,125	6,070	6,195	6,165	+179	
Ground Clearance at 12° oscillation	T mm	389	389	389	389	389	
Rear Axle to Counter weight	S mm	1,907	1,907	1,907	1,907	2082	
Overall length without bucket	R mm	6,267	6,267	6,267	6,267	+571	
Overall length	A mm	7,575	7,470	7,739	7,634	+396	
Operating weight	kg	13,691	13,806	13,861	13,976	+174	

1) Measured to the tip of the bucket teeth



# DIMENSIONS (DL250A-7M)



# STANDARD EQUIPMENT (DL250A-7M)

## STANDARD EQUIPMENT

### Engine

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- DOOSAN D1146 engine
- Air cleaner - Double element cartridge + Cyclone filtration in prior stage
- Fuel filter - Main fuel filter and fuel pre-filter with water separator
- External drains for engine oil and coolant changes
- Hydraulic radiator fan

### Hydraulic System

---

- Hydraulic control valve - 2 spool
- Hydraulic main pump - Triple tandem vane
- Hydraulic control levers
- Boom kick out - Automatic
- Bucket return to dig - Automatic

### Cabin and Interior

---

- 12V power socket
- Double filtered air cab
- Air conditioner and heater with recirculation function
- Dual Cup holder
- USB Charging Port
- Tinted glasses
- Sunglass Case
- Floor mat
- AM/FM Radio + MP3(USB)
- Windshield washer front and rear
- Windshield wipers front and rear
- Cigarette lighter
- Multiple storage compartments
- Front/Rear Sun visor
- Glass antenna
- Seat - Mechanical suspension
- ROPS cabin - ISO 3471
- FOPS cabin - ISO 3449
- Adjustable steering column
- Rear view mirrors - Interior 1
- Rear view mirrors - Exterior 2

### Electrical and lighting

---

- Battery cut-off switch
- Working light - Front 2 + Rear 2
- Driving light - Low and high beams
- Tail indicators - Stop, reversing lights
- Reversing alarm
- Electric horn
- Alternator - 24V, 80A
- Self-diagnostic system

### Linkage

---

- Z-bar loader linkage

### Drivetrain and Brake system

---

- Gear shift switch - Manual, Auto 1-4, Auto 2-4
- Kickdown and travelling direction selection
- Starting safety system
- Dual brake circuits with accumulator
- Dual service brake pedals
- Secondary brake system
- Parking brake - Electrical, hydraulic
- Differential - Limited slip

### Steering system

---

- Load sensing steering system

### External equipment

---

- Fender

\* Standard specification and options may vary by country.

\*\* Specification is subject to change without prior notice for quality enhancement.



# OPTIONAL EQUIPMENT (DL250A-7M)

## OPTIONAL EQUIPMENT

Some of these optional equipments may be standard in some markets. Some of these optional equipments cannot be available on some markets. You must check with the local Doosan dealer to know about the availability or to release the adaptation following the needs of the application.

### Hydraulic System

---

- Hydraulic Oil - VG32 Cold Weather
- Hydraulic Oil - VG46 Normal Weather
- Hydraulic Oil - VG68 Tropical Weather
- Hydraulic control valve - 3 spool
- Load isolation system (LIS)
- Hydraulic control levers - Mono
- Hydraulic control levers - FNR
- Automatic reverse Fan
- Quick coupler port and switch

### Cabin and Interior

---

- Seat - Air suspension with heater
- Camera - Rear view
- Rear Sun Visor

### Electrical and lighting

---

- License lamp
- Beacon - Rotating
- LED working lamp
- Heated side mirrors

### Linkage

---

- Z-bar high lift loader linkage

### Drivetrain and Brake system

---

- LSD/HD Differential
- Thermostat

### Steering system

---

- Emergency steering pump

### External equipment

---

- Fender - Full fender + rubber protector
- Fender - Rubber protector
- Wheel chocks
- Anti-noise Kit
- Additional counterweight - 0.3 ton
- Tool Kit

# TECHNICAL SPECIFICATION (DL250-7M)

## ENGINE

The high performance Doosan DL06 6 cylinder, direct injection, turbo charged, air-air intercooler engine offers low fuel consumption and low exhaust emissions, which are well below the requirements of the Phase III legislation

-GROSS SAE J1995

### Rated Power

---

129 kW(172 HP) @ 2,000 rpm (SAE J1995, gross)

### Max Torque

---

80 kgf.m (785 N.m) @ 1,500 rpm

### Displacement

---

5,890 cc (359 cu.in)

### Bore x stroke

---

Ø 100 x 125 mm

3 stages Air cleaner including a very efficient pre-cleaner, main and safety elements.

Hydraulically driven puller type fan with possibility of adjustment.

### Battery

---

System voltage : 24 V

Quantity : 12 V x 2

Capacity (AMP) : 100 Ah

### Starter power

---

24 V / 6 kW

### Alternator output

---

24 V / 80 A

## AXLES

The front and rear axles with planetary hub reductions are built on the base of very reputed components. Fitted as standard, the front and rear limited slip differentials, ensure the traction is optimal in all circumstances.

### Type

---

Fully floating planetary-type

### Limited slip Differential (front and rear)

---

30 %

### Oscillation angle

---

+/- 11°

### Brake

---

Dual circuit multi-plate wet discs.

Hydraulic actuation with pump and accumulator.

The sintered metal brake discs extended discs service intervals : increased three times

A spring applied and hydraulically released parking brake is mounted on the transmission shaft.

## TRANSMISSION

“Full Power Shift” transmission. It can be used in manual or automatic modes.

This transmission is based on components having excellent worldwide reputations. It is equipped with a modulation system allowing soft gear shifting and inversion of travel direction.

Safety devices also protect the transmission of bad operations.

The gear and direction shifting is operated by a single lever to the left of the steering wheel. A travel direction control is also mounted on the hydraulic joystick. (Optional)

The transmission can be de-clutched by the operation of brake pedal to increase the power available to the hydraulic pumps.

A safety device prevents the starting of the engine when not in neutral.

### Torque converter

---

Type : Single stage, one phase,

Stall ratio : 2.664

### Travel speed, kph

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Forward : 6.3 / 11.7 / 22.2 / 36 (1/2/3/4)

Reverse : 6.7 / 12.3 / 23.3 (1/2/3)



## HYDRAULIC SYSTEM

The hydraulic system uses variable displacement axial piston pump.

Pilot actuation with standard single lever.

Automatic arm kick-out is standard.

All of hydraulic lines are equipped with special seals (ORFS)

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### Max flow main

268 / 140 / 43 l/min (70.8 / 37 / 11.3 gal/min)

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### Working Pressure

200 bars

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### Pressure of the pilot circuit

33 bars

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### Filtration capacity on the return line

10 microns

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### Loading cycles time

Lifting speed (loaded) : 6.0 seconds

Dumping speed (loaded) : 1.3 seconds

Lowering speed (empty) : 4.0 seconds

## OPERATOR'S CABIN

The modular cabin allows excellent visibility in all directions. The optimal ventilation is obtained by numerous ventilation outlets. Touch buttons control the air re-circulation air conditioning and heating systems. The air of the cabin is filtered.

All necessary information for the operator are centralized in front of operators.

The main functions are actuated via switches located on a console at the right of the operator.

Generous storage places are well located. The cabin, mounted on viscous element and equipped with an air suspended seat, offers a better comfort for the operator.

**Access door : 1**

**Emergency exits : 2**

The cab conforms ROPS ISO 3471 and FOPS : ISO 3449

**Guaranteed external noise level Lwa**  
(following ISO 6395) 104 dB(A)

**Guaranteed inside of cabin noise level Lpa**  
(following ISO 6396) 72 dB(A)

## STEERING

The steering system is a load sensing type with a flow amplifier and a priority valve.

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### Steering angle

40°

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### Oil flow

140 l /min(37 gal/min) @ 2,200 rpm, high

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### Working pressure

180 bars

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### Steering cylinders (2)

bore x stroke : 70 x 425 mm

Emergency steering system with hydraulic pump driven by electric motor. (Optional)

## LIFTING SYSTEM

The lifting system with two cylinders and Z configuration is designed for the toughest jobs. The breakout force is very important and the bucket movements are fast.

The bucket angles are well kept in good positions on all the range of bucket movement.

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### Lifting cylinders (2)

bore x stroke : 140 x 790 mm

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### Bucket cylinders (1)

bore x stroke : 160 x 515 mm

## MAINTENANCE

Maintenance is easy due to excellent access.

The radiator fan swivels to aid cleaning.

The transmission is electronically controlled. An error coding system allows easy diagnosis of the systems and proper intervention

**Engine (oil) - 24.5 ℓ (6.4 US gal)**

**Radiator (cooling liquid) - 31.1 ℓ (8.2 US gal)**

**Fuel - 235 ℓ (61.8 US gal)**

**Hydraulic oil - 140 ℓ (36.8 US gal) - ST**

**Gear box and torque converter - 32 ℓ (8.4 US gal)**

**Front axle - 35 ℓ (9.2 US gal)**

**Rear axle - 23 ℓ (6.0 US gal)**

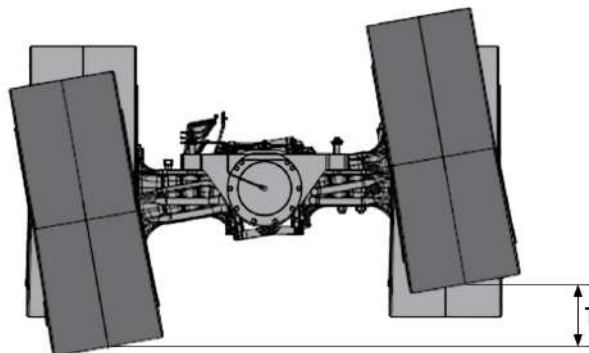
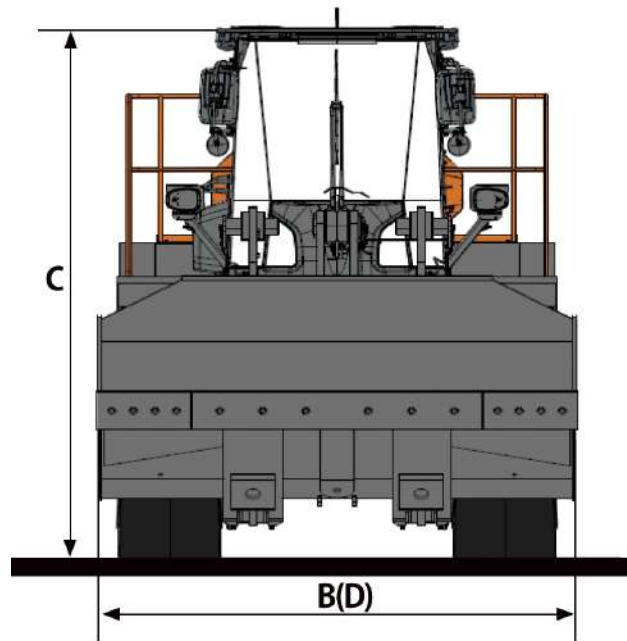
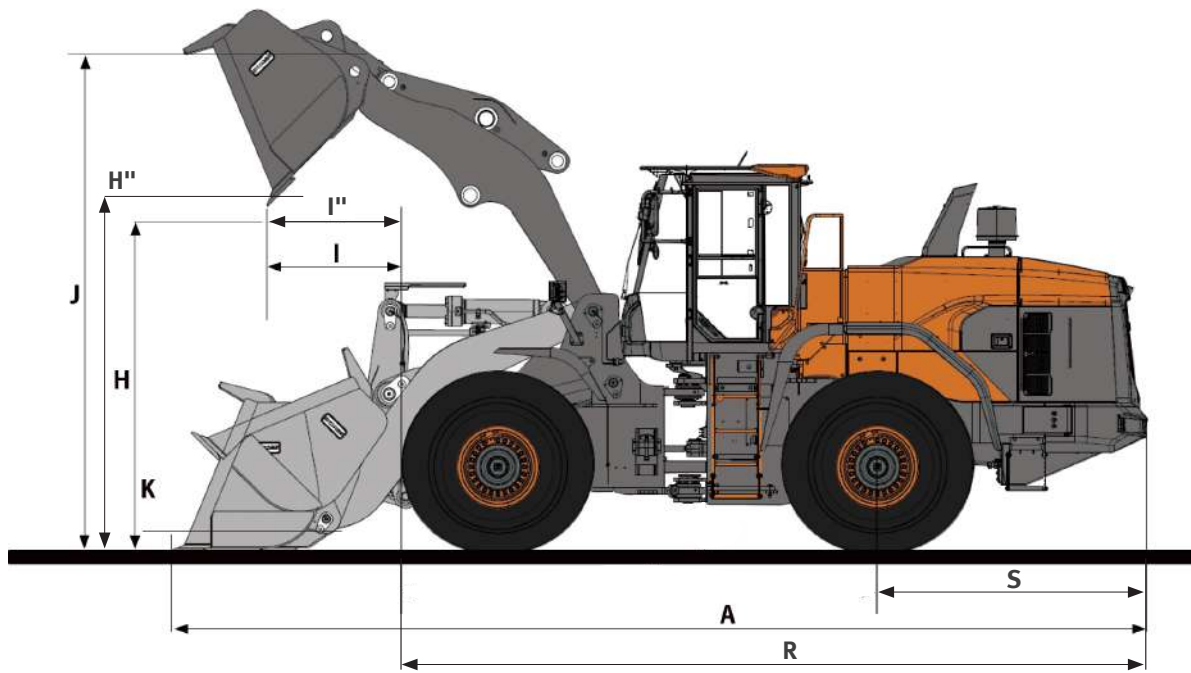
# OPERATIONAL DATA (DL250-7M)

BUCKET TYPE			General purpose				High Lift Arm
BUCKET MOUNT			PIN ON	PIN ON	PIN ON	PIN ON	
Configuration	Unit	Teeth	Bolt-on edge	Teeth	Bolt-on edge		
Capacity heaped ISO/SAE	m <sup>3</sup>	2.4	2.5	3	3.1		
Bucket width	D mm	2,740	2,740	2,838	2,838		
Breakout force	kN	120	111	102	95		
Static tipping load (straight)	kg	10,881	10,630	10,493	10,338	-1,725	
Static tipping load (at full turn)	kg	9,592	9,370	9,250	9,113	-1,519	
Dump height (at 45°) <sup>1)</sup> (at fully raised)	H(H") mm	2,715	2,795	2,600	2,680	+450	
Dump reach (at 45°) <sup>1)</sup> (at fully raised)	l(l") mm	1,145	1,075	1,260	1,190	-45	
Dump height (at max. dump) (at max. reach) <sup>1)</sup>	mm	685	785	535	635	+30	
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Digging depth	mm	75	70	75	70	65	
Height at bucket pivot point	J mm	3,850	3,850	3,850	3,850	+450	
Max. tilt angle at carry position	K deg	48	48	48	48	51	
Max. tilt angle at fully raised	M deg	59	59	59	59	61	
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Operating weight	kg	13,639	13,754	13,809	13,924	+174	

1) Measured to the tip of the bucket teeth



# DIMENSIONS (DL250-7M)



# STANDARD EQUIPMENT (DL250-7M)

## STANDARD EQUIPMENT

### Engine

---

- DOOSAN DLo6 engine
- Air cleaner - Double element cartridge + Cyclone filtration in prior stage
- Fuel filter - Main fuel filter and fuel pre-filter with water separator
- External drains for engine oil and coolant changes
- Hydraulic radiator fan

### Hydraulic System

---

- Hydraulic control valve - 2 spool
- Hydraulic main pump - Triple tandem vane
- Hydraulic control levers
- Boom kick out - Automatic
- Bucket return to dig - Automatic
- Automatic reverse Fan

### Cabin and Interior

---

- 12V power socket
- Double filtered air cab
- Air conditioner and heater with recirculation function
- Dual Cup holder
- USB Charging Port
- Tinted glasses
- Sunglass Case
- Floor mat
- AM/FM Radio + MP3(USB)
- Windshield washer front and rear
- Windshield wipers front and rear
- Cigarette lighter
- Multiple storage compartments
- Front/Rear Sun visor
- Glass antenna
- Seat - Mechanical suspension
- ROPS cabin - ISO 3471
- FOPS cabin - ISO 3449
- Adjustable steering column
- Rear view mirrors - Interior 1
- Rear view mirrors - Exterior 2

\* Standard specification and options may vary by country.

\*\* Specification is subject to change without prior notice for quality enhancement.

### Electrical and lighting

---

- Battery cut-off switch
- Working light - Front 2 + Rear 2
- Driving light - Low and high beams
- Tail indicators - Stop, reversing lights
- Reversing alarm
- Electric horn
- Alternator - 24V, 80A
- Self-diagnostic system

### Linkage

---

- Z-bar loader linkage

### Drivetrain and Brake system

---

- Gear shift switch - Manual, Auto 1 4, Auto 2 4
- Kickdown and travelling direction selection
- Starting safety system
- Dual brake circuits with accumulator
- Dual service brake pedals
- Secondary brake system
- Parking brake - Electrical, hydraulic
- Differential - Limited slip

### Steering system

---

- Load sensing steering system

### External equipment

---

- Fender



# OPTIONAL EQUIPMENT (DL250-7M)

## OPTIONAL EQUIPMENT

Some of these optional equipments may be standard in some markets. Some of these optional equipments cannot be available on some markets. You must check with the local Doosan dealer to know about the availability or to release the adaptation following the needs of the application.

### Hydraulic System

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- Hydraulic Oil - VG32 Cold Weather
- Hydraulic Oil - VG46 Normal Weather
- Hydraulic Oil - VG68 Tropical Weather
- Hydraulic control valve - 3 spool
- Load isolation system (LIS)
- Hydraulic control levers - Mono
- Hydraulic control levers - FNR
- Quick coupler port and switch

### Cabin and Interior

---

- Seat - Air suspension with heater
- Camera - Rear view
- Rear Sun visor

### Electrical and lighting

---

- License lamp
- Beacon - Rotating
- LED working lamp
- Heated side mirrors

### Linkage

---

- Z-bar high lift loader linkage

### Drivetrain and Brake system

---

- LSD/HD Differential
- Thermostat

### Steering system

---

- Emergency steering pump

### External equipment

---

- Fender - Full fender + rubber protector
- Fender - Rubber protector
- Wheel chocks
- Anti-noise Kit
- Additional counterweight - 0.3 ton
- Tool Kit