

# DOOSAN FORKLIFTS

## DIESEL PNEUMATICS

4,000 lb. to 7,000 lb. Capacity

**DOOSAN**

9-SERIES

D20S-9 | D25S-9 | D30S-9 | D33S-9 | D35C-9



# PRODUCT FEATURES

## OVERVIEW

### MODERN SAFETY FEATURES

- Guardian Stability System (GSS)
- Operator Sensing System (OSS)
- Superior Visibility through these improvements:
  - Optimized Mast Design
  - Lowered Dashboard
  - Redesigned Overhead Guard (Bar Type)
- Electronic Parking Brake (EPB)
- Programmable Speed Limit (Forward & Reverse)
- Single-Speed Powershift Transmission
- Auto Deceleration
- Seat Belt Interlock Switch (Option)
- Hi-Vis Orange Seat Belt
- Two Oversized Entry Grab Bars
- Secure Anti-Skid Step Plate
- Wideview Panoramic Rearview Mirror (Option)

### ERGONOMICALLY SUPERB

- Seat-Side Hydraulic Levers
- Low Effort Foot Pedal
- Smaller Steering Wheel w/ Turning Knob
- Telescopic and Tilting Steering Column
- Spacious Legroom
- Increased Headroom
- Recessed Tilt Cylinders
- High Comfort Seat
- Full Color LCD Display
- Convenience Tray

### RELIABLY PRODUCTIVE

- Powerful 2.4L Doosan D24 Engine
- Quiet Running Tier-4 Final Diesel Engine
- 3 Performance Modes (ECO/STD/HIGH)
- Enhanced Cooling Capacity
- Full Floating Type Cabin (Option)
- IP65 Rated Dust/Waterproof Connectors
- Electronic Inching
- LED Combination Lamps
- Transmission Control Unit (TCU)
- Vehicle Control Unit (VCU)
- Shift ProTek Hot Shift Protection
- Mast Tilt Indicator (Optional)





## THE NEW DOOSAN 9 SERIES DIESEL LIFT TRUCKS ARE READY TO WORK!

Doosan's reliable diesel products have gotten even better, with smart technology, superior components and extended planned maintenance intervals keeping operational expenses low.



### SMART VCU FUNCTIONS

- GSS Functions
- OSS Controls
- Mast Interlock
- Inching Pedal
- Seat Belt Alarm
- Empty Seat Alarm
- Water in Fuel Alarm
- Parking Brake Control
- Directional Shift Control
- Speed Limit Selector
- Mast Tilt Indicator
- Weight Scale
- Auto-Tilt Fork Leveling
- Multi-Performance Mode Indicator
- On Demand Hydraulic (Idle RPM Up)
- Digital Display Functions
- Planned Maintenance Reminder

\* List includes both standard and optional features

### LOWER TOTAL COST OF OWNERSHIP

- Optimized Scheduled Maintenance Intervals
  - Transmission Oil - Was 1,000, Now 2,000 hrs.
  - Drive Axle Oil - Was 1,000, Now 2,000 hrs.
  - Engine Oil - Was 500, Now 1,000 hrs.
- 80° Wide Opening Engine Cover
- Easy Access to Maintenance Points
- Dual Element Air Cleaner
- Planned Maintenance Notifications
- Onboard Diagnostics
- Tool Free Access Panels

### OPTIONAL FEATURES

- Modular Cabin
- Newly Designed Full Cabin
- Superior Climate Control, AC & Heat
- Rear View Camera
- Industry-Specific Application Packages
  - Anti-Dust Package
  - Anti-Corrosion Package
  - Foundry Package

# ENHANCED PRODUCTIVITY RELIABLY DURABLE

Doosans 9 Series Diesels  
set the standard for durability in  
Diesel Truck applications.

## OIL COOLED DISC BRAKE SYSTEM (OCDB)

### 5-Year/10,000 Hour Warranty

- Eliminate costly brake jobs; save thousands of dollars over the lifetime of the truck
- Brakes operate in oil, WHICH reduces heat and limits wear
- Increased braking surface for superior stopping power
- More easily serviced in the field than traditional brakes
- Sealed system for maximum protection against contamination

## REDESIGNED COOLING SYSTEM

The 9 Series' integrated cooling system offers the outstanding heat reduction of traditional heavy-duty radiators without the added costs:

- Dual-module radiator allows truck to run much cooler
- Transmission oil flow increased by 60%
- A newly designed heavy duty fan increases airflow
- Counterweight design increases airflow efficiency
- Steel, Lumber, Stone, Tile or Recycling; Even the most grueling applications are covered by the 9 Series Advanced Cooling System

## PRE-PROGRAMMED PERFORMANCE MODES

The 9 Series is an application-friendly truck that gives you the ability to change engine modes to fit your immediate needs. Simply select the desired mode through the display:

- E - ECO Mode - Designed for fuel economy
- S - Standard Mode - For normal output
- H - High Performance Mode - Increases the power output of the truck for tough work applications



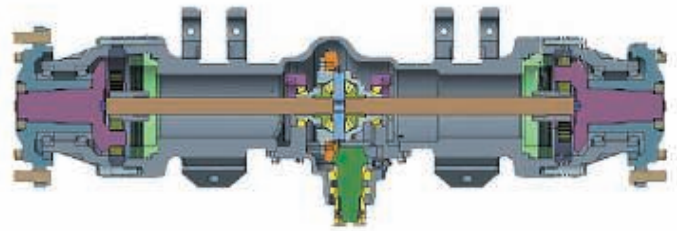
## ELECTRONIC INCHING SYSTEM DESIGN

Newly designed electronic inching pedal:

- Less pedal effort required
- No inching cable or associated costs
- More responsive than cable inching
- Less Operator fatigue

## NEW DRIVE-AXLE DESIGN

- Moved the planetary gear from the ends of the hub to further inside the housing. Now maintenance of the brake and planetary gear is much easier.
- Integrated cooling system increases lifetime of brake oil and brake discs
- Improved performance



## TRANSMISSION EMBEDDED PARKING BRAKE

- Built-in parking brake in transmission
- Parking brake is released automatically
- No parking lever required
- Negative type parking brake automatically engages when the ignition is switched off

## VEHICLE CONTROL UNIT (VCU)

The VCU monitors all aspects of the truck, making adjustments based on operator input and operating conditions. This extends the life of your forklift, saves service costs, raises working efficiency and safety.

VCU Functions include:

- Engine and Transmission Functions
- GSS System
- Safety alarms and warnings
- Vehicle displays and service conditions
- Braking and E-Stop Controls

## IP65 CONNECTORS

The use of IP65 grade connectors protects the electrical components from ingress of moisture and debris:

- Durability increased
- Run-Time maximized
- Stands up to severe applications

## SAFETY FEATURES FOR PEACE OF MIND

The 9 Series Diesel forklifts have advanced safety systems in place to protect your most valuable asset: your people. Multiple systems safeguard your investment.



### OPERATOR SENSING SYSTEM - (OSS)

Should the operator leave the seat, the OSS automatically prohibits functions such as:

- Truck movement forward or reverse
- Mast lift, lower and tilt functions
- Seat belt warning light reminds the operator to fasten seatbelt



### GUARDIAN STABILITY SYSTEM (GSS)

The Guardian Stability System (GSS) will dynamically protect the Operator and the load to reduce risks. Features Include:

- Decreased travel speed (50%) when mast is raised above primary stage
- Forward tilt reduced to 2° when mast is raised above primary stage
- Alarm sounds when mast is raised above primary stage with mast tilted more than 2°
- Auto speed control when sensors indicate a sharp turn



### AUTOMATIC DECELERATION

Should the Operator's foot slip from the accelerator pedal while driving, the truck quickly decelerates automatically, reducing braking distance by up to 50% for improved safety.



### ELECTRONIC PARKING BRAKE (EPB)

Automatically engages for safety. Releases automatically after Seat Belt Safety Sequence has been completed and accelerator has been depressed.



### SAFE ENTRY/EXIT

Safe Entry/Exit System provides a robust grab handle and wide anti-slip step plate, keeping the Operator safe while entering or exiting the truck in all weather conditions.



### SEAT BELT INTERLOCK (OPTION)

Operator must be seated and the seat belt fastened to start the truck.



### SHIFT PROTEK

The 9 Series limits directional changes unless a safe speed is detected, making quick shuttle applications a breeze.



### SPEED CONTROL

Quickly and easily set speed limits (forward and reverse) to levels which are both safe and productive.





## **SUPERB ERGONOMIC OPERATOR COMFORT**

### **ENHANCED OPERATOR COMFORT**

- Operator leg room is increased by over 30%
- Inching & brake pedal effort reduced by 70%
- Thick rubber floor mat reduces heat & noise
- Smaller steering wheel means less steer fatigue
- Increased insulation for sound reduction
- Comfortable fully adjustable suspension seat, standard

### **ERGONOMIC LAYOUT**

- Seat-Side hydraulic levers
- Lower dash profile for improved forward view
- Lower Step-Up into operator's compartment
- Secure 3-Point entry and exit system
- Pedals and seat designed for increased comfort
- Tilt cylinders located under the floor plate
- Fully adjustable seat and steering column



The ergonomic operator's compartment is designed to keep the operator in complete control at all times. This improves productivity while reducing stress and fatigue.



### ADJUSTABLE STEERING COLUMN

The telescopic, tilting steering column allows the operator to properly adjust for comfort. The steering wheel is sized for reduced fatigue.



### IMPROVED VISIBILITY

The 9 Series forklifts have increased visibility for the operator to work safely and comfortably, provides increased head room for enhanced operator comfort.



### REDESIGNED INCHING

The 9 Series incorporates a brand new electronic inching sensor, making inching more precise with less effort.



### MULTI-FUNCTION LCD DISPLAY

The 5 in. LCD monitor is bright and clear, providing good visibility outdoors to quickly and easily check truck conditions. 7" LCD display available.



### COMFORTABLE SUSPENSION SEAT

The seat is wide and comfortable. Fully adjustable for a wide range of sizes. Reduces fatigue, for increased productivity.



### CREATURE COMFORTS

Document clip and USB port are located within reach of the Operator. Makes it easy to manage paperwork and more convenient to charge mobile devices.



## EASY MAINTENANCE COSTS LESS TO OWN



### TOOL FREE ACCESS PANELS

The floor plate and side panels are easily detached without tools making inspections much faster.



### AUTO-MAINTENANCE NOTIFICATION

Important maintenance details such as truck service codes and consumable replacement cycles are communicated via the display.

LUBRICANT EXCHANGE CYCLE		
Item	Cycle	Time
T/M Oil	2,000Hr	329 Hr
T/M Oil Filter	2,000Hr	947 Hr
Hyd. Oil	2,000Hr	940 Hr
Hyd. Oil Return Filter	2,000Hr	933 Hr
Hyd. Oil Air Breather Filter	2,000Hr	936 Hr

### EASY TO READ DIAGNOSTICS

Easily diagnose truck conditions with a cable and laptop.



## Easy Access

### WIDE HOOD OPEN ANGLE

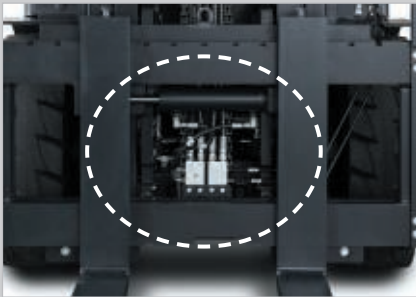
Hood open angle has been increased to 80° to provide easier access to the engine compartment.

### TRANSMISSION OIL FILTER AND PRESSURE CHECK

Transmission oil filter and pressure check port have been relocated to the top of the transmission for easy inspection and maintenance.

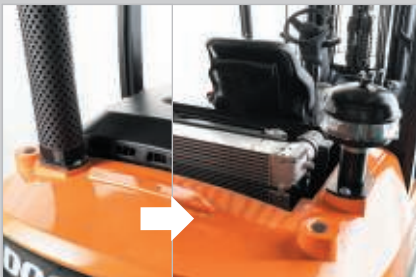
### CENTRALIZED JUNCTION BOX

Electronic components are assembled in a central junction box, making it convenient to inspect.



### HYDRAULIC LINE ATTACHMENT

Attachment hydraulics can be serviced individually, saving time and money.



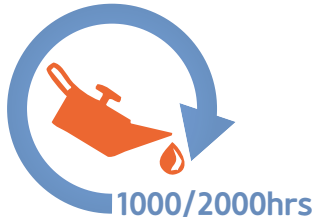
### CONVENIENT RADIATOR CHECK

Servicing the radiator is simple thanks to a quick-access cover on the counterweight.

4,000 lb. to 7,000 lb. Capacity

## COST SAVINGS

TOTAL COST OF OWNERSHIP REDUCED UP TO **82%**



### FEWER SERVICE INTERVALS

- Engine Oil Change: Was 500 hr.  
**Now 1,000 hr.**
- Transmission Oil Change: Was 1,000 hr.  
**Now 2,000 hr.**
- Drive Axle Oil Change: Was 500 hr.  
**Now 2,000 hr.**
- Total savings on 5 year routine maintenance = **\$1,170**



### HEAVY DUTY STEER AXLE

- Larger king pins and tapered roller bearings provide for a more durable design
- Angled rollers are stronger against side forces
- Tapered roller bearings have an inner race, eliminating wear on the king pin
- Total savings on 5-year steer components = **\$2,640**



### OIL COOLED DISC BRAKES (OCDB)

- Exclusive 5 Year/10,000 hr. warranty
- Enclosed system, practically no maintenance required
- Multi-Disc, oil cooled brakes provide smooth, consistent stopping power
- Keeps brakes cool in any application
- Total savings on 5 year brake repairs = **\$3,670**

D25S-9 SERIES TOTAL COST OF OWNERSHIP ASSESSMENT			SAVINGS ↓ <b>\$7,480*</b>
5 Year Repair/Maintenance	Competitor	Doosan	
Brake Services & Repair	\$4,415	\$745	
Planned Maintenance Services	\$2,106	\$936	
Steer Axle Services & Repair	\$2,640	\$0	
<b>Total</b>	<b>\$9,161</b>	<b>\$1,681</b>	

**OPERATING THE 9 SERIES FOR 5 YEARS CAN SAVE YOU 82% (OVER \$7,000) VERSUS COMPETITIVE MODELS!**

\* Total cost of ownership savings will vary by application and hours used.

## VERSATILE & AGILE

Doosan's 9 Series Diesels offer you specialized packages for those extreme applications. Customize your truck to fit the job and improve efficiency.

### ANTI-DUST PACKAGE

Prevents particulate buildup on the forklift. Preferred option for tough applications such as: Lumber & Stone, Steel, Ceramic Tile, Solid Fertilizer, Cotton and Recycling. Package includes: Belly Plate, Tilt Cylinder Bellows, Open Core Radiator, Radiator Screen, High Performance Engine Fan, Spark Arrestor and Top Roof Cover.



### FOUNDRY PACKAGE

Recommended for customers who mainly operate trucks in high temperature environments such as: Foundry (Iron, Aluminum, or Nonferrous Metals), Casting, Forging and Rolling. Package includes: Polycarbonate Windows, Heat Resistant Hose on Front End, Heavy Duty Cooling, Tilt Cylinder Protection, Solid Tire and Front Tire Guard (Steel), Belly Plate and Hydraulic Accumulator.



### ANTI CORROSION PACKAGE

Recommended for high temperature and high humidity environments. Package prevents the forklift from being corroded by acid, moisture or salt environments found in applications such as: Fisheries, Ports, Chemical Processing and Storage, Sugar and Beverage. Package Includes: Belly Plate, Tilt Cylinder Bellows, Anti Corrosion Paint and Thick Chromium Plating.

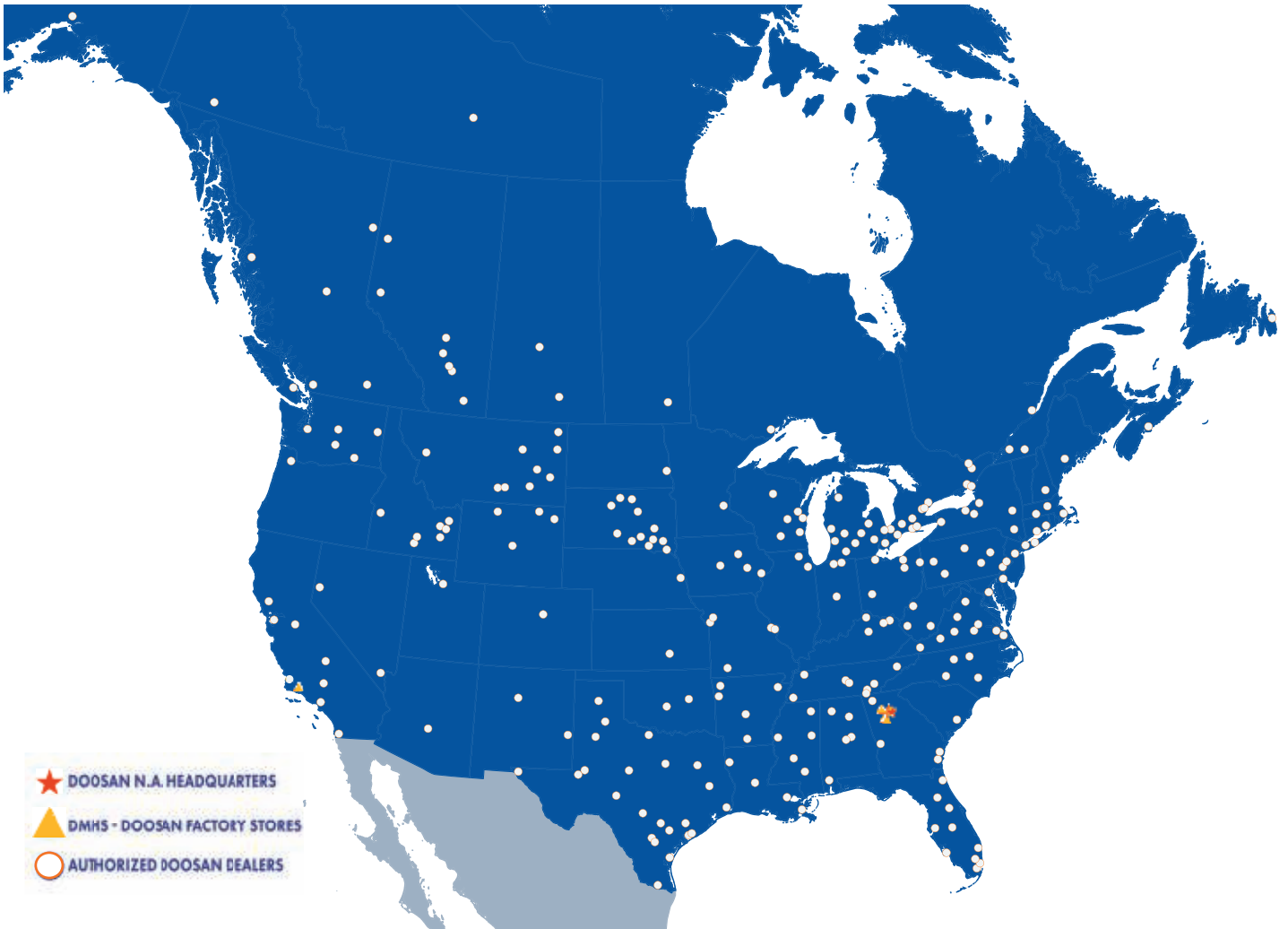


D20S-9 | D25S-9 | D30S-9 | D33S-9 | D35C-9



SAFETY	STANDARD	OPTIONAL
Guardian Stability System (GSS)	O	
Mast Interlock - Tilt, Lift and Lower	O	
Operator Sensing System (OSS)	O	
Anti-Cinch Orange Seat Belt	O	
Travel Speed Control	O	
Back-Up Alarm	O	
Rear Grab Bar w/ Horn	O	
Interlocking Seat Belt		O
Interlocking 4th Lever		O
Spark Arrester		O
Blue Spot Light		O
Panoramic Mirror		O
PRODUCTIVITY	STANDARD	OPTIONAL
Electric Controlled TCI (Turbo Charged Intercooler) Doosan Engine	O	
Low Pressure Pedal (Accelerator, Brake and Inching)	O	
Inching Pedal	O	
LED Lighting	O	
High Visibility Mast	O	
Transmission Control Unit (TCU)	O	
Vehicle Control Unit (VCU)	O	
3 Performance Modes (ECO/STD/HIGH)	O	
Rear View Camera		O
Sideshifter		O
ERGONOMICS	STANDARD	OPTIONAL
Adjustable Steering Column	O	
Spacious Leg Room	O	
Easy Entry & Exit	O	
Ergonomically Placed Hydraulic Controls	O	
Full Cabin with Heater or Air Conditioner		O
Premium Seat: w/ Suspension, Heat, Head Restraint		O
DURABILITY	STANDARD	OPTIONAL
Enclosed Electronic Control Units (ECU)	O	
IP65 Dust & Water Resistant Connectors	O	
Dual Element Air Cleaner	O	
Full Floating Driveaxle (with OCDB)	O	
Tapered Roller Bearings and Oversized King Pins (Steer Axle)	O	
Auto-Shift Controller	O	
Tilt Cylinder Cover	O	
Heavy Duty Cooling	O	
Radiator Screen		O
Vented Side Panel		O
Pre-Cleaner		O
SERVICEABILITY	STANDARD	OPTIONAL
CAN bus Communication System	O	
1,000 hr. & 2,000 hr. PM Intervals	O	
Ease of Service	O	
- Integrated Electric Components in the Junction Box (Relays and Fuses)	O	
- Tool-less Side Panels and Floor Plate	O	
- Wide Hood Open Range	O	
CERTIFICATIONS	STANDARD	OPTIONAL
Emission Regulation (Tier4 Final)	O	
Ultra Low Particulate Combustion (ULPC) System (with DOC)	O	
ISO 9001/ISO 14001	O	

\*This list is based on factory data. Standard or optional features may vary outside North America.



## Doosan's North American Dealer Network

Doosan provides superior material handling solutions to address your specific needs. From energy efficient electrics to robust internal combustion forklifts, Doosan is your full-line provider.

**Doosan Industrial Vehicle America**  
2475 Mill Center Parkway, Suite #400  
Buford, GA 30518  
P) 678-745-2200  
[www.DoosanLift.com](http://www.DoosanLift.com)

PSCD25S-9V1