# e-series **ADTS**

310E



-----

JOHN DEERE

AGILITY MEETS DURABILITY





# JOHN DEERE

# DESIGNED BY DEERE. REFINED BY YOU.

To design our new 310E Articulated Dump Truck (ADTs), we spoke with the experts — equipment owners and operators just like you. Through Customer Advocate Groups (CAGs), they told us exactly what they need in an ADT. We listened and responded with ground-level access to most service points including fuel fill. A quieter, pressurized Deere-designed cab. Standard adaptive suspension. Auto dump and hill hold that eliminate repetitive cycling motions. Onboard diagnostics that help keep the operator in the know and on the go. And smart features such as on-the-fly automatic differential lock, tire-pressure monitoring, and onboard payload weighing. All to boost productivity and uptime, while helping to keep operating costs down.

# **SOUND CHOICE** QUIET, TOUGH E-SERIES ADTS ARE A GOOD BET.

Designed and manufactured with state-of-the-art tools and techniques by a quality-conscious workforce at our facility in Davenport, lowa, USA, E-Series ADTs are exceptionally reliable and built with safety in mind. New Deere-designed cab is pressurized to keep things quiet, helping operators stay comfortable and alert, all shift long.



# Strong, lightweight dump body and chassis

High-alloy-steel dump body and chassis deliver superior strength and rigidity without adding excess weight.

### Automatic dump control

Push-button activate the auto-dump feature and pull the dump lever to shift the transmission to neutral, latch the service brakes, increase engine speed, and initiate body raise.

### **Optional cooling**

Heavy-duty, purpose-built axles are lubricated, filtered, and cooled, for longer life.

# Fuel-efficient cool-on-demand fan with reversing option

Engine, hydraulic, transmission, and service-brake coolers employ a hydraulically driven fan that runs only as fast or as often as necessary, helping conserve power and fuel. Reversible option back-blows cooler cores, minimizing the need for manual cleanout and increasing uptime and productivity in off-road conditions.

and DEERE

### **Rollover protection**

When rollover protection is enabled, the percentage the rear chassis is offlevel when unloading can be limited. Dump body will not raise and instructions will appear on the monitor for the ADT to be repositioned if the limit is exceeded.

### Powerful, fuel-efficient Tier 3 engines

Rugged EPA Tier 3/EU Stage IIIA PowerTech<sup>™</sup> diesels meet rigid emission regulations, enabling you to work without compromising power, reliability, or ease of operation. Our fieldproven technology is simple, reliable, fully integrated, and fully supported.



# SPOTLIGH ON SAFETY



# **SAFETY FACTOR** HELPING KEEP OPERATORS AND JOBSITES SAFE IS ALWAYS A PRIORITY.

Whether you are working at a mining site or quarry or on a dirt job, safety is always job one. Features that enhance the safety of these ADTs include easy-release remote park-brake activation, auto shutdown, reverse camera, and ground-level service of almost all components, to name only a few.

### Simple ground-level service

Most daily checks and periodic service are accessible from ground level, including fuel refills. Only servicing the transmission filters requires mounting the machine.

### Light the way

Front and rear worklights and optional high-mounted LED lights help illuminate the jobsite. Stairway lights can be pushbutton activated from inside the cab and also at ground level, for lighting the way in dark environments. Stairs are evenly spaced, for more sure-footed passage.

### Help holding the slope

Accelerometer reads the slope of the ADT to help the operator match the gear to the incline for holding machine speed if needed.

### Secure dump-body service

Safety bar locks the dump body to the mainframe and disengages the hydraulics when the dump body is in a fully upright position, for safer servicing.

### Streamlined mirror-bow design

Mirror-bow redesign increases visibility, reduces vibration, and enables easy access to the engine compartment. New lights on the mirrors help bring onboard weighing into clear focus.

### Reverse camera

Standard reverse camera with choice of display gives the operator visibility to obstacles in the direct path of the machine while backing up.

### Automatic shutdown

Auto shutdown can be programmed to turn the engine off after a predetermined period of inactivity, to reduce jobsite noise and conserve both fuel and machine hours.

### Release the park brake remotely

Remote park-brake release allows the park brake to be disengaged without climbing under the machine, for increased safety should towing be necessary.

### Auto-horn alerts

When activated, standard auto horn will automatically sound when the ADT is started, moves forward or in reverse, or changes direction.

# **MAKE A HAUL** MOVE MORE MATERIALS AT LESS COST.

E-Series ADTs deliver impressive power and torque for exceptional power-to-weight ratios and fast cycles. So you can keep working on steep slopes, through deep ruts, and in slippery muck. And haul more for less cost per ton.







All capacities stated are with optional tailgate and standard bucket.

### No more in-field weight calibrations

Optional onboard weighing system is factory calibrated to within two-percent accuracy when payload exceeds 50 percent. Displayed on the monitor during loading, with real-time load and tonnage data transmitted via JDLink<sup>™</sup>, access to accurate payload values removes the guesswork from daily production levels, increasing uptime and efficiency.

### Low-profile-tire option

Among a variety of tire options, a low-profile design provides superior flotation in soft ground conditions.

### Smooth, stable ride

Standard adaptive suspension system adjusts to the jobsite, stabilizing the ride and the cab, for operator comfort no matter the machine cycle, empty or loaded.

### Tackle tough terrain

Interaxle Differential Lock (IDL) transmits 50 percent of available torque to the forward axle and 50 percent to both rear axles, improving traction. Or it can be engaged on-the-fly while slipping, for smoother navigation of tough jobsites.

### **Optimized shifting**

Purpose-built transmission includes eight forward and four reverse gears to speed cycles and expand the working range across a wide range of jobsite conditions.

### Downhill-descent control provides steadiness on slopes

Eliminate guesswork with standard automatic descent control. Match the gear to the downhill incline, take your foot off the throttle or the brakes, and let the transmission retarder take over, helping reduce service-brake wear, operator fatigue, and maintenance costs.

# QUIETLY GO ABOUT YOUR BUSINESS

SEALED, PRESSURIZED CAB HELPS MINIMIZE FATIGUE.

The E-Series' quiet Deere-designed cab is sealed and pressurized to keep out dust and noise. Larger entryway allows roomier entrance and exit. And the fully adjustable air-ride seat makes smooth sailing out of any terrain.



# **UP AND RUNNING** YOU ASKED FOR IT.

# Consistent stopping power and maximum brake life

An industry-leading transmission retarder reliably slows the ADT. Outboard wet-disc brakes in all three axles are shielded from dirt and debris, for extended service life.

# Conveniently located remote jumper post

Jumper posts are easily reached from ground level should a booster pack need to be hooked up to a dead battery.

### Easy lube

Greaseless pins and bushings are used throughout except in the articulation joint and oscillation area, so only eight grease fittings need weekly attention. By customer request, those items employ lube banks that bring difficultto-reach zerks within easy reach. Convenient lube and maintenance chart helps confirm that nothing gets overlooked.

### Tire-pressure/temperaturemonitoring system

Integrated tire-pressure/temperaturemonitoring system comes standard to help boost tire life, productivity, and fuel efficiency. If pressure drops by 10 percent, a passive alarm appears on the monitor. Further decreases or overheating trigger an audible warning, and an email alert is sent via JDLink.

### Get valuable insight with JOHN DEERE WORKSIGHT<sup>™</sup>

9 9

John Deere WorkSight is an exclusive suite of telematics solutions that increases uptime while lowering operating costs. At its heart, JDLink<sup>™</sup> Ultimate machine monitoring provides real-time utilization data and alerts to help you maximize productivity and efficiency while minimizing downtime. Remote diagnostics enable your dealer to read codes and record performance data without a trip to the jobsite.

# Keep downtime down with JOHN DEERE ULTIMATE UPTIME

John Deere Ultimate Uptime, featuring John Deere WorkSight, is a customizable support solution available exclusively from your Deere dealer. This flexible offering maximizes equipment availability with standard John Deere WorkSight capabilities that can help prevent future downtime and speed repairs when needed. In addition to the base John Deere WorkSight features, our dealers work with you to build an uptime package that meets the specific needs of your machine, fleet, project, and business, including customized maintenance and repair agreements, onsite parts availability, extended warranties, fluid sampling, response-time guarantees, and more.

### Fast periodic maintenance

Available quick-service fluid-evacuation points, standard easy-access vertical filters, and environmental drains help speed periodic maintenance and increase uptime.

### **Color-coded service points**

Service points and sample ports are color-coded to help speed preventive maintenance and troubleshooting. Additional diagnostics including temperature and pressure are accessible through the monitor. BIOE SPECIFICATIONS

Engine	310E				
Manufacturer and Model	John Deere PowerTech™ Plus 6090				
Non-Road Emission Standards	EPA Tier 3/EU Stage IIIA				
Configuration	Inline 6 with exhaust gas recirculation (EGR) and variable-geometry turbocharger (VGT)				
Valves per Cylinder	4				
Displacement	9.0 L (549 cu. in.)				
Net Peak Power (ISO 9249)	263 kW (353 hp) at 1,900 rpm				
Net Peak Torque (ISO 9249)	1534 Nm (1,131 lbft.)				
Aspiration	Turbocharged and charge air cooled				
Fuel System	High-pressure common rail, with 10- and 2-micron filtration and water separator				
Cold-Start Aid	Optional ether start and block heater (110 and 220 volt, depending on location); factory-option diesel-fired coolant heater				
Cooling					
Engine Cooling	Liquid cooled with single-pass radiator, remote pressurized coolant tank, and charge air cooler				
Powertrain					
Transmission	8-speed forward, 4-speed reverse, countershaft/planetary type with integral retarder and torque-proportioning differentia				
Retarder	Integral, gear dependent, hydrodynamic, oil-to-air cooled, variable, fully automatic				
Differential	Torque-proportioning, planetary-type, inter-axle differential lock (IDL) with multi-disc clutch				
Output Torque Split	32% front / 68% rear				
Shift Controls	Fully automatic, electronically modulated powershift, load-speed adaptive with gear-skip and gear-hunting protection				
Operator Interface	Push-button F-N-R, selectable speed- and gear-range limits, selectable retarder aggressiveness, downhill-descent control, and gear-hold				
Speeds	Forward Reverse				
Gear 1	6 km/h (3.7 mph) 6 km/h (3.7 mph)				
Gear 2	8 km/h (5.2 mph) 8 km/h (5.2 mph)				
Gear 3	11 km/h (6.8 mph) 11 km/h (6.8 mph)				
Gear 4	16 km/h (9.9 mph) 16 km/h (9.9 mph)				
Gear 5	23 km/h (14.3 mph) —				
Gear 6	32 km/h (19.9 mph) —				
Gear 7	45 km/h (28.0 mph) —				
Gear 8	55 km/h (34.2 mph) —				
Axles					
Differential	Helical transfer gears, spiral bevel, hydraulically actuated multi-disc cross-axle differential lock (CDL)				
Final Drive	Extreme-duty mid-board-mounted planetary standard; cooled and filtered oil optional				
Brake System					
Service	Dual-circuit, hydraulically actuated, wet multi-disc brakes, outboard mounted				
Parking	Spring-applied hydraulically released, driveline-mounted, dry-disc with self-adjusting wear pad				
Auxiliary	Fully automatic; transmission mounted, gear dependent; hydrodynamic retarder with selectable levels				
Hydraulics					
Туре	Pressure-compensated load-sensing (PCLS), variable-displacement axial-piston main pump				
Secondary Steering Pump	Ground-driven gear pump with hydraulic unloader valve				
Dump Cylinders	Dual-acting, single-stage with heat-treated, chrome-plated, and polished cylinder rods; hardened steel replaceable bushings and pivot pins				
Cycle Time					
Power Down	7 sec.				
Raise Time	12 sec.				
Electrical					
Voltage	24 volt				
Number of Batteries	2 x 12 volt				
Battery Capacity	1,400-CCA batteries (2)				
Alternator	28 volt / 100 amp; optional 130 amp				
Steering System					
Туре	2 hydrostatically actuated, double-acting hydraulic cylinders; ground-driven secondary steering pump				
Angle	45 deg. side to side				
Lock-to-Lock Turns	4.2				
Suspension					
Front	Semi-independent leading A-frame geometry with transverse link for lateral restraint and self-leveling oil-filled struts with integrated nitrogen-charged accumulators				
Rear	Load-equalizing, pivoting walking beams with laminated suspension blocks, tri-link geometry, and transverse links for lateral restraint				
Dump Body					
Type	High-strength steel				
Canacity					
	•				
Capacity Struck	13.7 m <sup>3</sup> (17.9 cu. yd.)				
Struck Heaped at 2:1 ISO 6483 Ratio	17.5 m <sup>3</sup> (22.9 cu. yd.)				
Struck Heaped at 2:1 ISO 6483 Ratio With Optional Tailgate	17.5 m³ (22.9 cu, yd.) 18.3 m³ (23.9 cu, yd.)				
Struck Heaped at 2:1 ISO 6483 Ratio	17.5 m <sup>3</sup> (22.9 cu. yd.)				

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

# 2



Tires/Wheels	310E				
Size and Type		s standard / 750/65R25 optional			
Serviceability					
Ground-Level Service					
Fluids and Filters	Ground-level checks of end	ine, transmission, hydraulic oil, axle oil, and coolant levels; ground-level replacement of engine,			
	fuel, and optional axle filter				
Coolers					
Fluid Sampling	Standard swing-out coolers for easy cleaning; optional reversing fans Standard fluid-sampling ports; optional guick-service ports				
Refill Capacities	Standard haid Sampling po				
Fuel Tank	496 L (131 gal.)				
Engine Oil with Filter	43 L (11.4 gal.)				
Engine Coolant	48 L (12.7 gal.)				
Transmission Fluid	60 L (15.9 gal.)				
Hydraulic Reservoir	113 L (30.0 gal.)				
Axle Fluid	Standard capacity	Capacity with cooling option			
Front	37 L (9.8 gal.)	Add 5.1 L (1.3 gal.)			
Mid	37 L (9.8 gal.)	Add 4.2 L (1.1 gal.)			
Rear	37 L (9.8 gal.)	Add 4.5 L (1.2 gal.)			
Operating Weights	57 L (5.0 yal.)	Auu 1.5 E (1.2 Yai.)			
	Empty	Loaded			
With Standard Equipment Front	<i>Empty</i> 12 555 kg (27,679 lb.)	15 202 kg (33,515 lb.)			
Middle	5146 kg (11,345 lb.)	17 885 kg (39,430 lb.)			
	-	-			
Rear Total	5146 kg (11,345 lb.)	17 885 kg (39,430 lb.)			
	22 847 kg (50,369 lb.)	50 972 kg (112,374 lb.)			
Rated Payload	28 125 kg (62,005 lb.)				
Optional Components					
Dump-Body Liner (steel)	864 kg (1,905 lb.)				
Tailgate	640 kg (1,411 lb.)				
750/65R25 Tires Operating Dimensions	624 kg (1,376 lb.)				
Turning Circle Radius					
Inside	4.27 m (14 ft. 0 in.)				
Outside	8.02 m (26 ft. 4 in.)				
Machine Dimensions	0.02 11 (20 11. 4 11.)				
A Width with Mirrors in Operating Position	3.49 m (11 ft. 5 in.)				
B Length	10.16 m (33 ft. 4 in.)				
C Height	3.66 m (12 ft. 0 in.)				
Tire Options	23.5R25	750/65R25			
D Tread Width	2.28 m (7 ft. 6 in.)	2.28 m (7 ft. 6 in.)			
E Width Over Tires	2.20 m (7 ft. 5 in.)	3.07 m (10 ft. 1 in.)			
F Width Over Fenders	2.87 m (9 ft. 5 in.)	3.05 m (10 ft. 0 in.)			
G Ground Clearance	0.49 m (19.4 in.)				
	6.33 m (20 ft. 9 in.)				
<ul><li>H Dump Body Height, Dump Position</li><li>I Dump Body Side Rail Height</li></ul>	· ·				
	2.93 m (9 ft. 7 in.)				
J Dump Body Dump Lip Height, Transport Position K Dump Body Ground Clearance, Dump Position	2.26 m (7 ft. 5 in.)				
	0.63 m (24.7 in.)				
L Dump Body Length	5.59 m (18 ft. 4 in.)				
M Rear Axle Centerline to Rear of Dump Body	1.56 m (5 ft. 1 in.)				
N Mid Axle to Rear Axle Centerline	1.67 m (5 ft. 6 in.)				
0 Front Axle to Mid Axle Centerline	4.26 m (14 ft. 0 in.)				
P Front Axle Centerline to Front of Machine	2.67 m (8 ft. 9 in.)				
Q Approach Angle	24 deg.				
R Maximum Dump Angle	70 deg.				

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

product options and accessories NOT AVAILABLE in all region: may require modifications or additions to ensure compliance	s, and in some countries products	and accessories	N	 PP
Shipping Dimensions	310E			
Overall Height (suspension lowered 75 mm [3 in.])	3.59 m (11 ft. 9 in.)			
Overall Length	10.16 m (33 ft. 4 in.)			
Tire Options	23.5R25	750/65R25		
Overall Width				
Mirrors Folded In	3.07 m (10 ft. 1 in.)	3.12 m (10 ft. 3 in.)		
Tailgate Installed	3.26 m (10 ft. 8 in.)	3.26 m (10 ft. 8 in.)		

М

Ν

Ρ

# Additional equipment

Key: ● Standard ▲ Optional or special See your John Deere dealer for further information.

260E	310E	Engine
•	٠	Meets EPA Tier 3/EU Stage IIIA emissions
•	•	John Deere PowerTech™ Plus 6090 — 9.0L (549 cu. in.)
		inline 6
٠	•	Wet-sleeve cylinder liners
	•	Variable-geometry turbocharger (VGT)
•	•	External cooled exhaust gas recirculation (EGR)
	•	Dual-element air cleaner with dust-ejector valve
٠	•	Precleaner
•		High-pressure common-rail fuel injection
	•	Fuel/water separator
		Ground-level fueling
		Fast fill
•	•	Serpentine drive belt with automatic tensioner
		Ether start aid (recommended below –1 deg. C [30 deg. F])
<b>A</b>		Block heater (recommended below –18 deg. C [0 deg. F]
		Diesel-fired coolant heater (DFCH) (required below –25
		deg. C [—13 deg. F])
•	•	Programmable auto-shutdown
•	۲	Automatic turbo cool-down/shutdown timer
		Flat-black exhaust stack
<b>.</b>		Chrome exhaust stack
	<b>A</b>	Severe-duty fuel filter
		Severe-duty fuel filter with heater
		Cooling
٠	٠	Dual hydraulically driven, side-mounted fans
•		Side-mounted radiator, charge-air cooler, air-conditioner
		condenser, fuel cooler, transmission cooler, and hydraulic cooler
		Swing-out coolers
•	•	Integral engine oil cooler
•	•	Remote pressurized coolant reservoir
		John Deere Cool-Gard™ II long-life engine coolant
•	•	Fan guard
		Reversing fans
		Powertrain
٠	٠	Lockup torque converter
•	•	Adaptive shift control
٠	٠	Gear-hold switch

260E	310E	Powertrain (continued)
•	٠	Integral transmission input retarder
•	•	Automatic engaging retarder with selectable aggressiveness
٠	٠	Countershaft transmission with integral interaxle differential
۲	•	Planetary inter-axle differential lock (IDL) with 32-percent/
		68-percent nominal output torque split
•		Ground-level transmission-oil-level sight glass
		Transmission diagnostic ports
•	٠	Remote-mounted spin-on transmission oil filters
•	•	Hydraulically locking differentials
•	•	Differential lock floor switch
•	•	Automatic traction control with manual override
٠	٠	Wet-disc brakes on all 3 axles
•		Spring-applied, hydraulically released, dry-disc park brake
<b></b>		Axle filtration with remote-mounted filter
٠	۲	Axle oil-temperature sensing
		Electrical System
٠	٠	24-volt system voltage
•	•	100-amp alternator
		130-amp alternator
•	•	Solid-state electrical distribution system
•	٠	Battery disconnect
	•	Batteries, 2 x 1,400 CCA
•	٠	Drive lights
		Stair and service lights
-		Deluxe halogen work lights, front and rear
	<b></b>	Deluxe LED work lights, front and rear
•	•	LED rear turn signals/brake lights
		Electric horn
	•	Reverse alarm
<b>A</b>	<b>A</b>	Beacon/strobe light
		24-volt to 12-volt 15-amp converter
		24-volt to 12-volt 25-amp converter
-	-	Hydraulic System
•	•	Closed-center, load-sensing system
•	•	Axial-piston, variable-displacement main pump
•	•	Single-stage, dual-acting, dump-body tip cylinders
	•	Electrohydraulic dump-body control

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

or additions to ensure compliance with the local regulations of those countries. Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO 9249. Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ISO standards. Except where otherwise noted, these specifications are based on units with standard equipment, 23.5R25 radial earthmover tires, ROPS cabs, full fuel tanks, and 79-kg (175 lb.) operators.

# Additional equipment (continued)

260E 310E Steering System Ground-driven secondary steering pump . **Operator Station ROPS/FOPS** certification . Keyless start Tilt cab Programmable dump-body control settings Air conditioner Heater . AM/FM radio/CD player AM/FM radio/CD player with satellite radio and Bluetooth® Rear window guard Wiper/washer with intermittent control . Rear windshield wiper Tilt and telescoping steering wheel Fully adjustable, air-suspension, heated, high-back cloth . and leather seat Air-suspension, low-back, cloth seat 76-mm (3 in.) retractable operator seat belt Foldaway trainer seat with retractable seat belt 12-volt power outlet Cup holders . Reverse camera in main monitor Secondary reverse camera monitor Ashtray and 12-volt cigarette lighter Electric adjustable and heated mirrors Full-width retractable sun visor Cab precleaner Monitor: Speedometer / Fuel gauge / Transmission oil temperature gauge / Engine coolant temperature gauge / Gear indicator / Tachometer / Battery voltage / Hour meter /

> Odometer / Fuel consumption / Trip counter / Trip timer / Trip distance / Metric/Imperial units / Service codes/diagnostics / LED indicator lights and audible alarm / Programmable dump-body rollover protection / Onboard weighing display / Multi-language capability / Tire-pressure-moni-

toring system warning

Backlit sealed-switch module functions (2): Keyless start/ stop / F-N-R / Hazard light button / Park brake / Descent control / Gear-lock button / Gear up/down button / Park lights and headlights / Work lights / Beacon / Heated mirrors / IDL / Retarder adjustment / Automatic dumpbody control settings / Air-conditioner/heater controls Dump-body lever control **Dump Body** Dump-body safety lock when dump body is fully raised -Dump-body liner (steel) Tailgate Dump-body heater Less dump body and cylinders Other 23.5R25 radial earthmovers 750/65R25 optional Remote grease bank Quick service for transmission oil, engine oil, engine coolant, and hydraulic oil Articulation lock Electrically actuated hood Onboard weighing system with external load lights • Tire-pressure-monitoring system with temperature compensation Fire extinguisher Active hydraulic front suspension Dump assist, load assist, and hill assist . JDLink<sup>™</sup> Ultimate Cellular for the Americas, excluding Costa Rica — 5 years JDLink Ultimate Satellite for the Americas, excluding Costa Rica — 5 years

**Operator Station** (continued)

Key: ● Standard ▲ Optional or special

260E 310E

See your John Deere dealer for further information.



# WHEN IT GETS DEEP, WE'LL HELP GET YOU THROUGH.

# WE ARE DEERE.

You have the kind of job where being knee-deep in mud is just a day at the office. And we can relate because we like to think we're right there with you. Our highly trained service techs are just a call away and ready to help whenever you need us.



While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.