

455E CRAWLER LOADER

17,100 lb (7184 kg)

Transport Height.....	8 ft 5.9 in. (2.59 m)
Transport Length.....	13 ft 8.25 in. (4.17 m)
Machine Width	8 ft 1 in. (2.2 m)

ENGINE.....John Deere 300 Series

Number of Cylinders and Displacement	4 cylinders, 276 cu in. (4.5 L)
Air Intake System.....	Naturally aspirated or turbocharged
Bore and Stroke	4.19 x 5.00 in. (106 x 127 mm)
Compression Ratio	16.8 to 1
Net hp at 2100 rpm	70 SAE hp (52 kW) DIN 53 kW
Maximum Torque at 1200 rpm.....	228 lb-ft (309 N•m)
Nozzle Opening Pressure:	
New	3700 ± 50 psi (25 510 ± 345 kPa)
Used	3500 ± 50 psi (24 135 ± 345 kPa)
Valve Clearance (Cold):	
Intake	0.014 in. (0.36 mm)
Exhaust	0.018 in. (0.46 mm)
Oil Pressure at Fast Idle	50 ± 15 psi (345 ± 105 kPa)
Static Injection Pump Timing	Timing lines aligned w/ flywheel located at TDC
Dynamic Injection Pump Timing at Rated Load rpm*	15.5 + 0 - 1° BTDC
Speeds:	
Fast Idle.....	2275—2300 rpm
Full Load Rating	2100 rpm
Slow Idle	800 ± 25 rpm
Cylinder Pressure (Min).....	350 psi (2415 kPa)
Electrical System	12 V w/ battery disconnect switch
Cooling System Pressure	7 psi (48 kPa)
Flywheel Teeth.....	142

*Note: *For latest information, see Dealer Technical Assistance Center (DTAC) Solution K000413.*

TRANSMISSION

Model and Speeds.....	HLR 4-speed w/ high, low and reverse ranges
Oil Cooler Bypass Pressure.....	90 ± 10 psi (620 ± 69 kPa)
Lube Relief Pressure	65 ± 7 psi (450 ± 50 kPa)
HLR System Pressure	175 ± 10 psi (1210 ± 69 kPa)

HYDRAULIC SYSTEM—Open-Center

Pump Flow at 2000 psi, 2000 rpm (Min):	
New	23.3 gpm (88.3 L/min)
Used	19.7 gpm (74.6 L/min)

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RELIEF VALVE SETTINGS

Backhoe Circuit Relief Valve:

9300 Backhoe:

Boom Lower	2375 psi (16 375 kPa)
Boom Raise	3500 psi (24 135 kPa)
Crowd	2375 psi (16 375 kPa)
Swing Left	2000 psi (13 790 kPa)
Swing Right	2000 psi (13 790 kPa)

9550 Backhoe:

Boom Lower	2500 psi (17 240 kPa)
Boom Raise	2750 psi (18 960 kPa)
Crowd	2500 psi (17 585 kPa)
Swing Left	2375 psi (16 375 kPa)
Swing Right	2375 psi (16 375 kPa)

Loader Circuit Relief Valve:

Boom Lift	3100 + 200 - 0 psi (21 375 + 1380 - 0 kPa)
Bucket Dump	1250 + 125 - 0 psi (8620 + 860 - 0 kPa)
Bucket or Shear Roll-Back	2500 + 200 - 0 psi (17 240 + 1380 - 0 kPa)
Multi-Purpose Bucket Clam	2500 + 200 - 0 psi (17 240 + 1380 - 0 kPa)
Shear Dump	1800 ± 250 - 0 psi (12 410 + 1380 - 0 kPa)

System Relief Valve:

Loader	2250 + 200 - 0 psi (15 515 + 1380 - 0 kPa)
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CYCLE TIMES (Fast Idle and Hot Oil)

Boom Lower (Float)	6—4.2 sec
Bucket Fast Dump (Boom at Full Raise)	8—2.3 sec
Bucket Rollback	6—3.5 sec
Loader Boom Raise	2—7.1 sec

LUBRICANTS

See front of this book for the codes [].

CAPACITIES

U.S.

Metric

Cooling System [N]	4 gal	15 L
Engine Lubrication [E]	9 qt	8.5 L
Final Drive (Each) [C]	6.25 qt	5.91 L
Fuel Tank	31 gal	117 L
Hydraulic Reservoir [C]	7 gal	27 L
Hydraulic System [C]	13 gal	49 L
Steering Clutch Housing (Each) [C]	3.5 gal	13.2 L
Transmission [C]	8 gal	30 L