

990 EXCAVATOR

88,300 lb (40 052 kg)

Transport Height.....	12 ft (3.66 m)
Transport Length.....	39 ft 8.5 in. (12.11 m)
Machine Width.....	11 ft 11 in. (3.63 m)

ENGINE.....John Deere 700 Series

Number of Cylinders and Displacement.....	8 cylinders, 955 cu in. (15.7 L)
Air Intake System.....	Turbocharged
Bore and Stroke.....	5.5 x 5 in. (140 x 127 mm)
Net hp at 2100 rpm.....	260 SAE hp (193.9 kW) DIN 194 kW
Maximum Torque at 1300 rpm.....	858 lb-ft (1163 N•m)
Nozzle Opening Pressure:	
New.....	3800—3950 psi (26 200—27 235 kPa)
Used (Min).....	3600 psi (24 820 kPa)
Valve Clearance (Cold):	
Intake.....	0.016 in. (0.41 mm)
Exhaust.....	0.023 in. (0.58 mm)
Oil Pressure at Fast Idle.....	60—75 psi (415—515 kPa)
Static Injection Pump Timing.....	Timing lines aligned w/ flywheel located at TDC
Speeds:	
Slow Idle.....	800 ± 25 rpm
Fast Idle.....	2275—2300 rpm
Full Load Rating.....	2100 rpm
Cylinder Pressure Hot (Min).....	380 psi (2620 kPa) cranking w/ injectors removed
Turbo Boost Pressure at Full Load.....	14—16 psi (100—120 kPa)
Flywheel Teeth.....	123
Electrical System.....	24 V
Alternator.....	42 amp

POWER TRAIN

Propel Motor.....	2-speed bent axis variable displacement axial piston hydraulic motor w/ planetary and spur reduction
Swing Speed (360°).....	10.9 sec
Propel Speed (Track Revolution) at 1200 rpm.....	19—21 sec at high speed 44—46 sec at low speed

HYDRAULIC SYSTEM—Open-Center

Pump Flow (Min) Used, at 2700 psi (18 615 kPa) and 2000 rpm	
First Pump Section.....	55 gpm (208 L/min)
Second Pump Section.....	55 gpm (208 L/min)
Third Pump Section.....	21 gpm (80 L/min)
Pilot Pressure Reducing Valve.....	440 ± 20 psi (3032 ± 138 kPa)
Pilot Accumulator Pressure.....	100 ± 10 psi (690 ± 69 kPa)

RELIEF VALVE SETTINGS

Boom Circuit (2 Used).....	3000 + 50 - 100 psi (20 685 + 345 - 690 kPa)
Crowd Circuit (2 Used).....	3000 + 50 - 100 psi (20 685 + 345 - 690 kPa)
Bucket Circuit (2 Used).....	3000 + 50 - 100 psi (20 685 + 345 - 690 kPa)
Swing Crossover.....	2500 psi (17 240 kPa)
Propel Crossover (4 Used).....	3100 ± 50 psi (21 375 ± 345 kPa)
System Pilot Relief (2 Used).....	2800 + 100 - 50 psi (19 305 + 690 - 345 kPa)
Main System Relief Valve Setting.....	2700 + 50 - 100 psi (18 615 + 345 - 690 kPa)
Pilot Control.....	440 ± 20 psi (3032 ± 138 kPa)
Pilot Accumulator.....	100 psi (690 kPa)

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Courtesy of Machine.Market

CYCLE TIMES

Boom Raise w/ Arm Retracted and

Bucket Extended	4.5 sec
Arm Extend	5.7 sec
Bucket Retract	2.7 sec

LUBRICANTS

See front of this book for the codes [].

CAPACITIES

	U.S.	Imp.	Metric
Engine:			
Cooling System [N]	16 gal	13.4 gal	60.6 L
Crankcase w/ Filter [E]	40 qt	33.3 qt	37.9 L
Planetary Final Drives (Each) [J]	21 qt	17.5 qt	20.0 L
Swing Drive (Each) [J]	9.25 qt	7.7 qt	8.7 L
Propel Brakes (Dry)			
Hydraulic:			
System [R]	220 gal	183.3 gal	832.8 L
Reservoir [R]	92 gal	76.7 gal	348.2 L
Fuel Tank	143 gal	119.2 gal	541.3 L