

Engine Specifications	GD320
Model	GD320
Type	4-stroke, OHV, single cylinder
Displacement	317 cm ³ (19.34 cu-in)
Max. horsepower	7.0 HP (5.2 kW) at 3,600 rpm
Max. torque (crank PTO)	15.7 N·m (1.6 kg·m, 11.57 ft·lb) at 2,500 rpm
Cooling system	Forced-air
Lubricating system	Forced spray
Starting system	Recoil starter or starter motor
Stopping system	Fuel cut with speed control lower (Stop lever)
Fuel used	Diesel fuel
Fuel tank capacity	4.6 l (1.21 US. Gal, 1.2 Imp. Gal.)
Fuel consumption	180 g/HPh
PTO shaft rotation	Counterclockwise (from PTO shaft side)
DIMENSIONS AND WEIGHT	GD320
Length, mm (in)	S: 420 (16.5), Q: 445 (17.5), W: 460 (18.1), V: 465 (18.3)
Width, mm (in)	405 (15.9)
Height, mm (in)	470 (18.5)

Dry weight, kg (lb)	48.0 (105.8)
Operating weight, kg (lb)	53.0 (116.9)
CYLINDER BLOCK AND HEAD	
Compression ratio	19:1
Bore x Stroke	76 mm X 70 mm (2.99 x 2.76 in)
Sleeve internal diameter	76.000-76.017 mm (2.9921-2.9928 in)
Piston skirt outer diameter	75.940-75.960 mm (2.9898-2.9905 in)
Number of piston rings	(compression / oil): 2 / 1
Ring side clearance	Top: 0.065-0.095 mm (0.0026-0.0037 in) Second: 0.055-0.085 mm (0.0022-0.0033 in) Oil: 0.020-0.055 mm (0.0008-0.0022 in)
Ring end gap	Top: 0.20-0.35 mm (0.008-0.014 in) Second: 0.20-0.35 mm (0.008-0.014 in) Oil: 0.20-0.40 mm (0.008-0.016 in)
Ring width	Top: 1.990-1.975 mm (0.0783-0.0778 in) Second: 1.990-1.975 mm (0.0783-0.0778 in) Oil: 3.990-3.970 mm (0.1571-0.01563 in)
Connecting rod small end ID	20.010-20.028 mm (0.7878-0.7885 in)
Connecting rod big end ID	41.000-41.024 mm (1.6142-1.6151 in)
Crankpin outer diameter	37.976-38.000 mm (1.4951-1.4961 in)
Main journal outer diameter	46.970-46.994 mm (1.8492-1.8502 in)

Distortion of cylinder head	0.05 mm (0.002 in)
Valve Arrangement	OHV
Valves	2
Stem outer diameter (standard)	INTAKE: 6.590-6.575 mm (0.2594-0.2589 in) EXHAUST: 6.550-6.540 mm (0.2579-0.2575 in)
Guide internal diameter	INTAKE / EXHAUST: 6.600-6.615 mm (0.2598-0.2604 in)
Spring free length	33.7 mm (1.33 in)
Cam lobe height	INTAKE / EXHAUST: 41.022 mm (1.6150 in)
Valve rocker arm internal diameter	INTAKE / EXHAUST: 16.000-16.018 mm (0.6300-0.6306 in)
Rocker arm shaft outer diameter	INTAKE / EXHAUST: 15.984-15.966 mm (0.6293-0.6286 in)
TIGHTENING TORQUE SPECS	
Cylinder head bolts	43 Nm; 4.3 kg·m; 31 ft·lb
Cylinder head nuts	11 Nm; 1.1 kg·m; 8 ft·lb
Rocker arm shaft nuts	11 Nm; 1.1 kg·m; 8 ft·lb
Tappet adjusting nuts	9 Nm; 0.9 kg·m; 6.5 ft·lb
Oil pan bolt bolts	M11: 71 Nm; 7.1 kg·m; 51 ft·lb M8: 22 Nm; 2.2 kg·m; 16 ft·lb
Connecting rod cap nuts	32 Nm; 3.2 kg·m; 23 ft·lb
Relief valve	33 Nm; 3.3 kg·m; 24 ft·lb

Drain plug bolt	33 Nm; 3.3 kg·m; 24 ft·lb
Flywheel nut	250 Nm; 25.0 kg·m; 180 ft·lb
Injection nozzle	10 Nm; 1.0 kg·m; 7 ft·lb
Air breather joint nuts	18 Nm; 1.8 kg·m; 13 ft·lb
Fuel injection pump bolts	22 Nm; 2.2 kg·m; 16 ft·lb
Fuel joint bolts	28 Nm; 2.8 kg·m; 20 ft·lb
Air breather bolt	18 Nm; 1.8 kg·m; 13 ft·lb
Fuel pipe nuts	20 Nm; 2.0 kg·m; 14 ft·lb
Muffler nuts, bolts	22 Nm; 2.2 kg·m; 16 ft·lb
Fuel tank bolts	11 Nm; 1.1 kg·m; 18 ft·lb
Fuel filter bolts	11 Nm; 1.1 kg·m; 18 ft·lb
Drain bolt	11 Nm; 1.1 kg·m; 18 ft·lb
Others	
5 mm bolts, nuts	5.0 Nm; 0.50 kg·m; 4.0 ft·lb
6 mm bolts, nuts	10 Nm; 1.0 kg·m; 7 ft·lb
8 mm bolts, nuts	21 Nm; 2.1 kg·m; 15 ft·lb
10 mm bolts, nuts	35 Nm; 3.5 kg·m; 25 ft·lb
12 mm bolts, nuts	60 Nm; 6.0 kg·m; 44 ft·lb
SERVICE INFORMATION	GD320

Engine	
Maximum speed	3,750 ± 150 rpm
Idle speed	1,400 ± 150 rpm
Cylinder compression	26.0 kg/cm ² (370 psi) at 300 rpm
Valve clearance	Intake valve: 0.15 ± 0.02 mm (0.006 ± 0.00078 in) Exhaust valve: 0.15 ± 0.02 mm (0.006 ± 0.00078 in)
Oil system	
Oil type	Diesel oil (API Service Classification CC or CD)
Recommended oil	SAE 10W-30
Oil capacity	1.15 l (1.21 US. qt, 1.01 Imp. qt.)
Oil pressure	3.9-5.2 kg/cm ² (55.5-74.0 psi) at 3,600 rpm
Generator	
Resistance	2.0 ± 0.5 Ω
Starter motor	
Brush length	10 mm (0.39 in)
Mica depth	0.4-0.5 mm (0.016-0.020 in)