

Engine Specifications	
Model	GX390K1
Type	4-stroke, OHV, single cylinder, inclined by 25°
Displacement	389 cm ³ (23.7 cu-in)
Max. Horsepower	13.0 HP at 3,600 rpm
Max. Torque (crank PTO)	27 Nm at 2,500 rpm
Carburetor	Horizontal type, butterfly valve
Cooling System	Forced-air
Ignition System	Transistorized magneto ignition
Lubricating System	Forced splash
Starting System	Recoil and Starter motor
Stopping System	Ignition primary circuit ground
Fuel Used	Unleaded gasoline (octane number 86 or higher)
Fuel Consumption	6.5 Liters/h (1.72 US gal, 1.43 Imp gal)
PTO Shaft Rotation	Counterclockwise (from PTO shaft side)

Dimensions and Weight	
Length	380 mm (15.0 in)
Width	450 mm (17.7 in)
Height	443 mm (17.4 in)
Dry Weight	31.0 kg (68.3 lb)
Operating Weight	37.0 kg (81.6 lb)

Cylinder Block and Head	
Compression Ratio	8.0:1
Bore x Stroke	88 x 64 mm (3.5 x 2.5 in)
Sleeve Internal Diameter	88.000 mm (3.465 in)
Piston Skirt Outer Diameter	87.985 mm (3.4640 in)
Number of Piston Rings (Compression/Oil)	2 / 1
Ring Side Clearance	Top/Second 0.030 – 0.060 (0.0012 – 0.0024)
Ring End Gap	Top 0.20 – 0.40 mm (0.01 – 0.02 in) Second 0.20 – 0.40 mm (0.01 – 0.02 in)
Oil (Side Rail)	0.20 – 0.70 mm (0.01 – 0.03 in)
Ring Width	Top 2.0 mm (0.08 in) Second 2.0 mm (0.08 in)
Connecting Rod Small End I.D.	20.005 mm (0.7876 in)
Connecting Rod Big End I.D.	36.025 mm (1.4183 in)

Crankshaft Outer Diameter	35.985 mm (1.4167 in)
Cylinder Head Warp (Limit)	0.10 mm (0.004 in)
Valve Arrangement	OHV
Valves	2
Stem Outer Diameter (Standard)	Intake 6.590 mm (0.2594 in) Exhaust 6.550 mm (0.2579 in)
Guide Inner Diameter (Intake/Exhaust)	6.60 mm (0.6260 in)
Cam Height	Intake 32.40-32.80 mm (1.276-1.291 in) Exhaust 31.89-32.29 mm (1.256-1.271 in)
Camshaft Outer Diameter	15.984 mm (0.6293 in)

Tightening Torque Specs	
Connecting Rod Bolt (M8x1.25 Special)	14 Nm; 1.4 kg·m; 10 ft·lb
Cylinder Head Bolt (M10x1.25)	35 Nm; 3.5 kg·m; 25 ft·lb
Flywheel Nut (M16x1.5 Special)	115 Nm; 11.5 kg·m; 83 ft·lb
Rocker Arm Pivot Lock Nut (M6x0.5)	10 Nm; 1.0 kg·m; 7 ft·lb
Rocker Arm Pivot Bolt (M8x1.25 Special)	24 Nm; 2.4 kg·m; 17 ft·lb
Crankcase Cover Bolt (M8x1.25)	24 Nm; 2.4 kg·m; 17 ft·lb
Oil Level Switch Joint Nut (M10x1.25)	10 Nm; 1.0 kg·m; 7 ft·lb
Fuel Filter Joint Nut (M10x1.25)	2 Nm; 0.2 kg·m; 1.4 ft·lb
Muffler Mounting Nut (M8x1.25)	24 Nm; 2.4 kg·m; 17 ft·lb

Air Cleaner Wing Nut (M6x1.0)	9 Nm; 0.9 kg·m; 6.5 ft·lb
Oil Drain Bolt (M12x1.5)	23 Nm; 2.3 kg·m; 17 ft·lb
Fuel Tank Bolt (M8x1.25)	24 Nm; 2.4 kg·m; 17 ft·lb
Air Cleaner Mounting Nut (M6x1.0)	10 Nm; 1.0 kg·m; 7 ft·lb
Fuel Strainer Cup (M24x1.0)	4 Nm; 0.4 kg·m; 2.9 ft·lb
Standard Torque Values (Various Sizes)	See table below

Standard Torque Values (Various Sizes)	
Bolt, Nut (5 mm)	5.5 Nm; 0.55 kg·m; 4.0 ft·lb
Bolt, Nut (6 mm)	10 Nm; 1.0 kg·m; 7 ft·lb
Bolt, Nut (8 mm)	24 Nm; 2.4 kg·m; 17 ft·lb
Bolt, Nut (10 mm)	37.5 Nm; 3.75 kg·m; 27 ft·lb
Bolt, Nut (12 mm)	55 Nm; 5.5 kg·m; 40 ft·lb

Maintenance Data	
Maximum Speed	3850 ± 150 rpm
Idle Speed	1400 ± 150 rpm
Cylinder Compression	6.0-8.5 kg/cm ² (85-121 psi, 0.59 – 0.83 MPa) at 600 rpm
Valve Clearance	Intake valve 0.15 ± 0.02 (0.006 ± 0.001) Exhaust valve 0.20 ± 0.02 (0.008 ± 0.001)

Carburetor	
Main Jet	Internally vented carburetor bowl: #115
Float Height	13.2 mm (0.52 in)
Pilot Screw Opening	Internally vented carburetor bowl: 3

Oil System	
Oil Type	Honda 4-stroke or an equivalent (SE or later)
Recommended Oil	SAE 10W-30
Oil Capacity	1.1 L (1.16 US gal, 0.97 Imp qt)

Ignition System	
Ignition Timing	B.T.D.C. 25° (Fixed)
Spark Plug	NGK: BP6ES, BPR6ES DENSO: W20EP-U, W20EPR-U
Spark Plug Gap	0.7-0.8 mm (0.028-0.031 in)
Air Gap	0.2-0.6 mm (0.01-0.02 in)

Starter Motor	
Brush Length	7.0 mm (0.28 in) limit: 3.5 mm (0.14 in)
Mica Depth	1.0 mm (0.04 in) limit: 0.2 mm (0.01 in)