

Engine Specifications	
Model	GX390 RT2/T2/UT2
Description Code	GCBCT, GCBDT, GCBCT
Type	4-stroke, OVH, single cylinder, inclined by 25°
Displacement	389 cm ³ (23.7 cu-in)
Max. Horsepower	11.7 HP at 3,600 rpm
Max. Torque (crank PTO)	26.5 Nm (2.7 kg·m, 19.5 ft·lb) at 2500 rpm
Carburetor	Horizontal type, butterfly valve
Cooling System	Forced-air
Ignition System	C.D.I. (Capacitor Discharge Ignition) type magneto ignition
Lubricating System	Forced splash
Starting System	Recoil, Recoil and Starter motor
Stopping System	Ignition exciter coil circuit open
Fuel Used	Unleaded gasoline (octane number 86 or higher)
Fuel Consumption	3.5 L/h (0.92 US gal, 0.77 Imp gal)

Cylinder Block and Head	
Compression Ratio	8.2:1
Bore x Stroke	88 x 64 mm (3.5 x 2.5 in)
Sleeve Internal Diameter	88.000-88.017 mm (3.4646-3.4652 in)
Piston Skirt Outer Diameter	87.975-87.985 mm (3.4635-3.4640 mm)
Number of Piston Rings (Compression/Oil)	2 / 1
Ring Side Clearance	Top 0.015-0.060 (0.0006-0.0024)
Ring End Gap	Top 0.20-0.35 mm (0.0079-0.0138 in) Second 0.35-0.50 mm (0.0138-0.0197 in)
Oil (Side Rail)	0.2-0.7 mm (0.01-0.03 in)
Ring Width	Top 1.160-1.190 mm (0.0457-0.0470 in) Second 1.160-1.175 mm (0.045-0.0463 in)
Piston Pin Outer Diameter	19.994-20.000 mm (0.7872-0.7874 in)
Connecting Rod Small End Inner Diameter	20.005-20.020 mm (0.7876-0.7882 in)
Connecting Rod Big End Inner Diameter	36.025-36.039 mm (1.4183-1.4189 in)
Crankpin Outer Diameter	35.975-35.985 mm (1.4163-1.4167 in)

Cylinder Head	
Warpage (Limit)	0.10 mm (0.004 in)
Valve Arrangement	OHV
Valves	2
Stem Outer Diameter (Standard)	Intake 6.575-6.590 mm (0.2589-0.2594 in) Exhaust 6.535-6.550 mm (0.2573-0.2579 in)
Cam Height	Intake 32.498-32.698 mm (1.2794-1.2873 in) Exhaust 31.985-32.185 mm (1.2592-1.2671 in)
Camshaft Outer Diameter	15.966-15.984 mm (0.6286-0.6293 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	
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	5.2-7.0 kg/cm ² (74-100 psi, 0.51-0.69 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	BE85C B: #100 BE85L A: #95 BE85Q A: #92 BE85Q A: #102 BE89F B: #108 BE89R A: #102 BE89U A: #108 BE94B A: #100 BE94A A: #115
Float Height	13.2 mm (0.52 in)
Pilot Screw Opening	BE85C B: 1 – 3/4 turns out BE85L A: 2 turns out BE85Q A: 1 – 7/8 turns out BE85Q A: 2 – 1/4 turns out BE89F B: 2 – 1/4 turns out BE89R A: 2 – 1/4 turns out BE89U A: 2 – 1/4 turns out BE94B A: 1 – 3/4 turns out BE94A A: 2 – 1/4 turns out

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 qt, 0.97 Imp qt)

Ignition System	
Ignition Timing	B.T.D.C. 10° / 1,400 rpm
Spark Plug	NGK: BPR6ES DENSO: W20EPR-U
Spark Plug Gap	0.7-0.8 mm (0.028-0.031 in)
Ignition Coil 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)