



Below and Following Are Pages For
Club Car Engine Service Specifications
and Guide.

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SERVICE SPECIFICATIONS

ITEM	SPEC.	SERVICE LIMIT
Crankshaft Axial Play		0.0137 in. (0.35 mm)
Crankshaft Crankpin Journal	O.D. (MIN.)	1.3954 in. (35.444 mm)
Crankshaft PTO-Side Journal	O.D. (MIN.)	1.1783 in. (29.930 mm)
Crankshaft Flywheel-Side Journal	O.D. (MIN.)	1.1783 in. (29.930 mm)
Crankshaft Balancer- Link-Rod Journals	O.D. (MIN.)	1.8474 in. (46.924 mm)
Camshaft Axial Play		0.0137 in. (0.35 mm)
Service Specifications Chart Continued on Following Page.		

ITEM	SPEC.	SERVICE LIMIT
Service Specifications Chart, Continued:		
Camshaft PTO-Side Journal	O.D. (MIN.)	0.9026 in. (22.927 mm)
Camshaft Flywheel-Side Journal	O.D. (MIN.)	0.9026 in. (22.927 mm)
Camshaft Cam Lobes (IN. and EX.)	O.D. (MIN.)	1.287 in. (32.70 mm)
Connecting Rod Big-End Bearing	I.D. (MAX.)	1.4003 in. (35.567 mm)
Connecting Rod Small-End Bearing	I.D. (MAX.)	0.7500 in. (19.051 mm)
Counterbalancer Rod Big-End Bearing	I.D. (MAX.)	1.8554 in. (47.126 mm)
Counterbalancer Rod Small-End Bearing	I.D. (MAX.)	0.4750 in. (12.064 mm)
Piston Top Ring Groove Clearance (with NEW ring)	(MAX.)	0.0063 in. (0.16 mm)
Piston Second Ring Groove Clearance (with NEW ring)	(MAX.)	0.0055 in. (0.14 mm)
Piston Oil-Ring Groove Clearance and End Gap		Visual inspection only
Piston Pin	O.D. (MIN.)	0.7470 in. (18.975 mm)
Piston Pin Hole	I.D. (MAX.)	0.7493 in. (19.033 mm)
Crankcase Cover Camshaft bearing	I.D. (MAX.)	0.9079 in. (23.063 mm)
Cylinder Bore	I.D. Standard	3.0700 to 3.0708 in. (77.980 to 78.000 mm)
Cylinder Bore	I.D. (MAX.)	3.0735 in. (78.067 mm)
Cylinder Bore (out of round)	(MAX.)	0.0022 in. (0.056 mm)
Crankshaft Bearing	I.D. (MAX.)	1.1841 in. (30.075 mm)
Camshaft Bearing	I.D. (MAX.)	0.9080 in. (23.063 mm)
Oil Pump Housing	I.D. (MAX.)	1.6050 in. (40.766 mm)
Oil Pump Housing	Depth (MAX.)	0.4004 in. (10.170 mm)
Oil Pump Shaft Bearing	I.D. (MAX.)	0.5028 in. (12.770 mm)
Rocker Shaft	O.D. (MIN.)	0.4704 in. (11.949 mm)
Rocker Arm Bearing	I.D. (MAX.)	0.4754 in. (12.074 mm)
Valve Seat Angle (IN. EX.)	Standard	45°
Valve Seat Width	Standard	0.0197 to 0.0433 in. (0.50 to 1.10 mm)
Valve Seat Width	(MAX.)	0.075 in. (1.9 mm)
Valve Face Angle (IN. EX.)	Standard	45°
Valve Margin (IN. EX.)	(MAX.)	0.024 in. (0.6 mm)
Valve Clearance (IN. EX.)	Standard	0.0047 in. (0.12 mm)
Intake Valve Stem	O.D. (MIN.)	0.2728 in. (6.930 mm)
Exhaust Valve Stem	O.D. (MIN.)	0.2722 in. (6.915 mm)
Valve Guide Hole (Intake)	I.D. (MAX.)	0.2781 in. (7.065 mm)
Valve Guide Hole (Exhaust)	I.D. (MAX.)	0.2781 in. (7.065 mm)

ITEM	SPEC.	SERVICE LIMIT
Valve Spring (Free Length)	(MIN.)	1.2894 in. (32.75 mm)
Oil Pump Shaft	O.D. (MIN.)	0.4971 in. (12.627 mm)
Outer Rotor	O.D. (MIN.)	1.5932 in. (40.467 mm)
Outer Rotor Width	(MIN.)	0.3905 in. (9.92 mm)
Relief Valve Spring (Free Length)	(MIN.)	0.748 in. (19.0 mm)
Counterbalancer Weight Bearing	I.D. (MAX.)	1.0283 in. (26.118 mm)
Support Shaft	O.D. (MIN.)	1.0199 in. (25.907 mm)
Breather Reed Valve (Valve Tip Air Gap)	(MAX.)	0.008 in. (0.2 mm)
Valve Stem (IN. and EX.) (Stem Bend)	(MAX.)	0.0012 in. (0.03 mm)
Push Rod (Rod Bend)	(MAX.)	0.012 in. (0.30 mm)
Valve Guide (IN. and EX.)	I.D. Standard	0.2756 to 0.2762 in. (7.00 to 7.015 mm)

SPECIFICATIONS FOR RESIZING CYLINDER BORE

ITEM	OVER SIZE	LIMITS
Final Boring Bore Diameter	0.010 in. (0.25 mm) 0.020 in. (0.50 mm)	3.0791 to 3.0799 in. (78.210 to 78.230 mm) 3.0890 to 3.0898 in. (78.460 to 78.480 mm)
Final Bore Diameter	0.010 in. (0.25 mm) 0.020 in. (0.50 mm)	3.0799 to 3.0807 in. (78.230 to 78.250 mm) 3.0898 to 3.0906 in. (78.480 to 78.500 mm)

TORQUE SPECIFICATIONS

ITEM	SIZE	SPECIFICATIONS
Cylinder Head Bolts	M8	220 in.lb (24 N-m)
Valve Clearance Adjustment Nuts	M5	90 in.lb (10 N-m)
Connecting Rod Bolts (Coat Threads with Engine Oil)	M7	180 in.lb (20 N-m)
Flywheel Retaining Nut	M16	63 ft.lb (86 N-m)
Crankcase Cover to Block Bolts	M8	250 in.lb (28.3 N-m)
Starter/Generator Bracket to Block Bolts	M8	200 in.lb (23 N-m)
Oil Drain Plug	M14	20 ft.lb (27.1 N-m)
Fan Housing Screws	M6	90 in.lb (10 N-m)
Fan Shroud Screws	M6	25 in.lb (2.8 N-m)
General Bolts with Number 4 and Nuts	M8 M6 M5	130 in.lb (15 N-m) 50 in.lb (5.9 N-m) 30 in.lb (3.4 N-m)

ADJUSTMENTS AND SETTINGS

ITEM	LIMITS
Spark Plug Gap (Standard)	0.029 in. (0.74 mm)
Ignition Coil Air Gap (Standard)	0.012 in. (0.304 mm)
Oil Pressure (MIN.) at fast idle speed	45.5 psi. (314 kPa)
Oil Filter: bypass-valve opening pressure	11.4 to 17.0 psi. (78 to 118 kPa)
Compression Pressure (MIN.)	156 psi. (1076 kPa)
Crankcase Vacuum (MIN.) at governed speed	1.18 in. (30 mmHg)
Cylinder Head-Gasket Surface Flatness (MAX.)	0.002 in. (0.05 mm)
Valve Clearance (IN. and EX.) when engine is cold	0.006 in. (0.15 mm)
Engine RPM @ 12-15 MPH (Vehicle Ground Speed)	2700 RPM \pm 30 (DS Golf Car, Tourall)
Engine RPM @ 12-15 MPH (Vehicle Ground Speed)	2860 RPM \pm 30 (Carryall I)
Engine RPM @ 14-16 MPH (Vehicle Ground Speed)	3200 RPM \pm 30 (Carryall II)

