

SPECIFICATIONS

Model Numbers	100ESL72 (20" transom)
*Horsepower (B.I.A.-certified)	100 hp at 5000 rpm
Full throttle operating range	4500 to 5500 rpm
Tank test with test wheel	
Part Number 384199	4800 rpm
Engine type	90° V-type, 4 cylinder, 2 cycle
Bore and stroke	3-3/8" bore x 2-19/32" stroke
Piston displacement	92.6 cubic inches
Piston ring sets (3 per set) standard	Part Number 382825
.020" oversize	Part Number 382826
.030" oversize	Part Number 384384
Diameter of ring	3.375 in. (standard)
Width of ring0935 - .0925 in.
Piston ring lbs. compression recommended when compressed	9.7 to 14.5 lbs.
Piston less rings	
Standard	Part Number 383674
.020" oversize	Part Number 383697
.030" oversize	Part Number 384383
Crankshaft size	
Top journal	1.4980 - 1.4975
Center journals	1.3752 - 1.3748
Bottom journal	1.1815 - 1.1810
Connecting rod crank pin	1.1828 - 1.1823
Carburetion	2 carburetors - Float feed with fixed high and low-speed Automatic, manual lever and remote control choke
Float level setting	Remove float bowl, turn carburetor upside down so weight of float closes needle; float should now be parallel to gasket surface.
Carburetor high speed orifice plug	Part Number 317607 Hole size .062 in.
Carburetor low speed orifice plug	Part Number 317474 Hole size .027 in.
Inlet needle seat065 - .062 Use a #52 drill as gage
Cooling system	Thermostatically controlled re- circulating system
Propeller gear ratio	13:26
Propeller supplied with motor	Aluminum 3 blade, 13-1/4" dia. x 17" pitch
Alternate propellers	Aluminum 3 blade, 14" dia. x 11" pitch Aluminum 3 blade, 14" dia. x 13" pitch Aluminum 3 blade, 13-3/4" dia. x 15" pitch Aluminum 3 blade, 13" dia. x 19" pitch Aluminum 3 blade, 12-3/4" dia. x 21" pitch Aluminum 3 blade, 12-3/4" dia. x 23" pitch Bronze 2 blade, 13-3/4" dia. x 21" pitch Bronze 2 blade cupped, 13-3/4" dia. x 21" pitch Bronze 2 blade cupped, 13-3/4" dia. x 23" pitch Stainless steel 3 blade, 13" dia. x 19" pitch Stainless steel 3 blade, 12-3/4" dia. x 21" pitch Stainless steel 3 blade, 12-3/4" dia. x 23" pitch Stainless steel 3 blade, 13-3/8" dia. x 17" pitch
Speed control	Remote control - Synchronized throttle and spark
Gear shift control	Hydro-Electric - forward, neutral, reverse - remote control
Shift solenoids	5-6 ohms (10 ohms scale)
Weight (without fuel tank)	252 lbs. (Fuel tank weight 11 lbs. net)
Fuel capacity	6 gallons
Starter	Electric and emergency rope
Electrical system	9 amp flywheel alternator
Starter amp draw when cranking	185 amperes maximum
Ignition (CD Breakerless)	Battery - Power Pulse
Spark plug	ACV40FFM or Champion L-77V
Spark plug torque	17-1/2 - 20-1/2 foot-pounds
Sensor air gap028 in.

*Horsepower established at sea level. Allow 2% reduction per 1000' above sea level.

Part No. 580740 Coil Test Specifications - New Stevens Tester Model
 No. M.A. - 75 **Use Model CD-1 Adapter

<u>Switch</u>	<u>Coil</u>	<u>Index Adjustment</u>
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Merc-O-Tronic with Capacitor Discharge Adapter Model 55-980

Operating Amperage	Primary Resistance	Secondary Continuity
Min. - Max.	Min. - Max.	Min. - Max.
1.4		22 - 26

Graham Tester Model 51

Secondary Continuity 3000 ohms maximum
 Primary Continuity 1.2 ohms maximum
 Coil Index 60
 Coil Test (Normal) 9 minimum
 Coil Test (Amplified) 80 minimum
 Gap Index 50 maximum

CLEARANCE CHART

Power head
 Piston and wrist pin - loose end0006 max. - .0001 min.
 Piston ring gap017 max. - .007 min.
 Piston ring groove clearance007 max. - .0045 min.
 Cylinder and piston004 max. - .0025 min.
 Crankshaft bearings
 Upper Roller type
 Center Roller type
 Lower Ball type
 Crankshaft end play0335 max. - .0006 min.
 Connecting rod bearings
 Piston end Roller type
 Crankshaft end Roller type
 Lower unit
 Gearcase head and propeller shaft Roller type
 Driveshaft to gearcase - upper Roller type
 Pinion to gearcase Roller type
 Propeller shaft to oil pump Roller type
 Front gear bushing to propeller shaft002 max. - .001 min.
 Propeller on shaft spline

TORQUE CHART

Power head
 Flywheel nut 100-105 ft.-lbs.
 Connecting rod screws 348-372 in.-lbs. (29-31 ft.-lbs.)
 Cylinder head screws 216-240 in.-lbs. (18-20 ft.-lbs.)
 Crankcase to cylinder screws and nuts
 Upper 144-168 in.-lbs.
 Center 162-168 in.-lbs.
 Lower 144-168 in.-lbs.
 Spark plugs 17-1/2-20-1/2 ft.-lbs.
 Lower journal bearing retainer plate screws 96-120 in.-lbs.
 Stator screws and distributor cap 48-60 in.-lbs.
 Crankcase head screws
 Upper 120-144 in.-lbs. (10-12 ft.-lbs.)
 Lower 96-120 in.-lbs. (8-10 ft.-lbs.)
 Starter thru bolts 110-122 in.-lbs.
 Starter drive assembly locknut 25-30 ft.-lbs.
 Driveshaft pinion nut 60-65 ft.-lbs.

NOTE

When tightening two or more screws on the same part, DO NOT tighten screws completely, one at a time. To avoid distortion of the part, first tighten all screws together to one-third of specified torque, then to two-thirds of specified torque, then torque down completely.