

**SPECIFICATIONS**

Model Numbers . . . 25E74 - Standard length (15" transom) electric start  
 25EL74 5" longer (20" transom) electric start  
 25R74 - Standard length (15" transom)  
 25RL74 - 5" longer (20" transom)

\*Horsepower (B.I.A.-certified) . . . . . 25 hp at 5500 rpm  
 Full throttle operating range . . . . . 5000 to 6000 rpm  
 Tank test with test wheel Part Number 376913 . . . . . 4900 rpm  
 Engine type . . . . . 2 cylinder, 2 cycle, alternate firing  
 Bore and stroke . . . . . 2-1/2" bore x 2-1/4" stroke  
 Piston displacement . . . . . 22.0 cubic inches  
 Piston ring sets (2 per set) standard . . . . . Part Number 385349  
 .030" oversize . . . . . Part Number 385350  
 Diameter of ring . . . . . 2.5000 in. (standard)  
 Width of ring . . . . . Upper .0900 - .0895 in.  
 Lower .0625 - .0615 in.  
 Lbs. compression recommended when compressed . . . Upper 2 to 5 lbs.  
 Lower 3 to 5-1/2 lbs.  
 Piston and rings standard . . . . . Part Number 385339  
 .030" oversize . . . . . Part Number 385340

**Crankshaft size**  
 Top journal . . . . . 1.0000 - .9995 in.  
 Center journal . . . . . 1.0000 - .9995 in.  
 Bottom journal . . . . . 1.0000 - .9995 in.  
 Connecting rod crank pin . . . . . 1.0005 - 1.0000 in.

**Carburetion** . . . . . Single barrel, float feed, low-speed adjustment  
**Float level setting** . . . . . Parallel to and 1/16 above gasket surface  
**Carburetor orifice plug 309517** . . . . . .072"  
**Inlet needle seat** . . . . . .065" - .062" Use a #52 drill as a gage  
**Cooling system** . . Vari-Volume (combination positive displacement and centrifugal pump). Thermostatically controlled by-pass system  
**Propeller gear ratio** . . . . . 12:21  
**Propeller drive pin** . . . . . Part Number 307949 3/16" x 1-25/64"

**Propeller, supplied with motor** . . . . . 3 blade, 9" dia. x 10" pitch  
**Propeller, optional** . . . . . 3 blade, 9" dia. x 9" pitch  
**Propeller, optional** . . . . . 3 blade 9" dia. x 10" pitch weedless  
**Speed control** . . . . . Twist grip, synchronized throttle and spark  
**Gear shift control** . . . . . Forward, neutral and reverse  
**Weight (less fuel tank)** . . . . . 25E74-95 lbs., 25EL74-97 lbs.  
 25R74-85 lbs., 25RL74-87 lbs.

**Fuel tank (net)** . . . . . 11 lbs.  
**Fuel capacity** . . . . . 6 gallons  
**Starter** . . . . . 12 volt electric key and automatic rewind rope  
**Starter amperage draw when cranking** . . . . . 120 amperes maximum  
**Ignition** . . . . . Low tension magneto  
**Spark plug** . . . . . Champion UJ4J, - 14 mm  
**Spark plug gap** . . . . . .030 inch  
**Spark plug torque** . . . . . 17-1/2 - 20-1/2 Foot-pounds  
**Breaker point gap** . . . . . .020 inch  
**Condenser** . . . . . Part Number 580422  
 Capacity . . . . . .25 - .29 Mfd.  
**Driver coil resistance** . . . . . .80 ± .05 ohm  
**Ignition coil** . . . . . Part Number 581370

**COIL TEST SPECIFICATIONS**

Stevens Tester Model No. M.A.-75 or M.A.-80

Switch	Index Adjustment with MA14 Adapter
B	25

**Merc-O-Tronic**

Operating Amperage	Primary Resistance		Secondary Continuity	
	Min.	Max.	Min.	Max.
1.7	.8	1.2	60	70

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

Graham Tester Model 51

Maximum Secondary	Maximum Primary	Coil Index	Minimum Coil Test	Gap Index
20000	14.0	50	24	45

Coil Ohmmeter Test

PRIMARY (Low Ohms)	SECONDARY (High Ohms)
1.35 ± .3	13500 ± 1500

**CLEARANCE CHART**

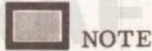
**POWER HEAD**

Piston and wrist pin - loose end	.0005 Max. - .0000 Min.
Piston ring gap - upper and lower	.017 Max. - .007 Min.
Piston ring groove clearance - lower	.0040 Max. - .0020 Min.
Cylinder and piston	.0048 Max. - .0033 Min.
<b>Crankshaft bearings</b>	
Upper	Roller type
Center	Needle type
Lower	Roller type
Crankshaft end play	.023 Max. - .009 Min.
<b>Connecting rod bearings</b>	
Piston end	Needle type
Crankshaft end	Needle type

**LOWER UNIT**

Driveshaft - upper	Needle bearing
Propeller shaft in front gear bushing	.0015 Max. - .0005 Min.
Gearcase head and propeller shaft	.002 Max. - .001 Min.
Driveshaft pinion in gearcase	.0023 Max. - .0011 Min.
Propeller shaft to reverse gear bushing	.0015 Max. - .0005 Min.
Front gear to gearcase bearing	.0060 Max. - .0045 Min.
Rear reverse gear to bushing	.002 Max. - .0005 Min.

**TORQUE CHART**



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.



Re-check torque on cylinder head screws and spark plugs after motor has been run and has reached operating temperature, and motor has cooled comfortable to touch.

**POWER HEAD**

Flywheel nut	40-45 Foot-pounds
Connecting rod screws	180-186 Inch-pounds
Cylinder head screws	96-120 Inch-pounds
<b>Crankcase to cylinder screws</b>	
Upper	120-144 Inch-pounds
Center	120-144 Inch-pounds
Lower	120-144 Inch-pounds
Starter housing	96-120 Inch-pounds (8-10 Foot-pounds)
Spark plug	17-1/2 - 20-1/2 Foot-pounds

**LOWER UNIT**

Lever to shift rod clamp screw	60-84 Inch-pounds (5-7 Foot-pounds)
Side mounts, upper and lower nuts	144-168 Inch-pounds (12-14 Foot-pounds)
Pilot shaft to steering bracket screws	84-108 Inch-pounds (7-9 Foot-pounds)
Lower mount housing to pilot shaft screws	168-192 Inch-pounds (14-16 Foot-pounds)
Slip clutch propeller	90 Foot-pounds
Lower motor cover mount nuts	72-96 Inch-pounds (8-6 Foot-pounds)
*Pull at propeller shaft for tilt up lower units	30-35 lbs.
*Pull at propeller shaft to overcome reverse lock	200-350 lbs.
*Standard length lower unit.	

**STANDARD SCREWS**

	In.-Lbs.	Ft.-Lbs.
No. 6	7-10	
No. 8	15-22	
No. 10	29-36	2-3
No. 12	36-48	3-4
1/4"	60-84	5-7
5-16"	120-144	10-12
3/8"	216-240	18-20