

SPECIFICATIONS

Model Numbers	9R72 - Standard length (15" transom) 9RL72 - 5" longer (20" transom)	Speed control	On steering handle, synchronized throttle and spark											
*Horsepower (B.I.A. - certified)	9-1/2 hp at 4500 rpm	Gear shift control	Forward, neutral, & reverse											
Full throttle operating range	4000 to 5000 rpm	Weight	Model 9R72 - 60 lbs Model 9RL72 - 61 lbs (without fuel tank) (fuel tank weight 11 pounds net)											
Tank test with test wheel	Part No. 379673 4400 rpm	Fuel capacity	6 gallons											
Engine type	2 cylinder, 2 cycle alternate firing	Starter	Manual - self rewind											
Bore and stroke	2-5/16" bore x 1-13/16" stroke	Ignition	Flywheel magneto											
Piston displacement	15.2 cubic inches	Spark plug	AC-M42K, Champion J4J - 14mm											
Piston ring sets (3 per set) standard	Part No. 379360	Spark plug gap	.030 inch											
.030" oversize	Part No. 384073	Spark plug torque	17-1/2 - 20-1/2 foot-pounds											
Diameter of ring	2.3125" (standard)	Breaker point gap	.020 inch											
Width of ring	.0935" - .0925"	Condenser Capacity	Part Number 580321 .18 - .22 mfd.											
Lbs. compression recommended when compressed	3 to 5 lbs.	Part No. 580416 Coil Test Specifications												
Piston less rings standard	Part No. 379134	Old Stevens Tester												
.030" oversize	Part No. 384072	<table border="1"> <thead> <tr> <th>Switch</th> <th>Index Reading</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2.0 - 2.5</td> </tr> </tbody> </table>			Switch	Index Reading	A	2.0 - 2.5						
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Crankshaft size top journal	.8125" - .8120"	New Stevens Tester Model No. M.A.-75												
center journal	.8132" - .8127"	<table border="1"> <thead> <tr> <th>Switch</th> <th>Index Adjustment</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>22</td> </tr> </tbody> </table>			Switch	Index Adjustment	A	22						
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bottom journal	.8125" - .8120"	Merc-O-Tronic												
Connecting rod crank pin	.8132" - .8127"	<table border="1"> <thead> <tr> <th>Operating Amperage</th> <th>Primary Resistance Min. - Max.</th> <th>Secondary Continuity Min. - Max.</th> </tr> </thead> <tbody> <tr> <td>1.4</td> <td>.45 - .55</td> <td>35 - 45</td> </tr> </tbody> </table>			Operating Amperage	Primary Resistance Min. - Max.	Secondary Continuity Min. - Max.	1.4	.45 - .55	35 - 45				
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1.4	.45 - .55	35 - 45												
Cooling system	Vari-Volume (combination positive displacement & centrifugal pump) thermostatically controlled	Graham Tester Model 51												
Carburetion	Float feed, low-speed adjustment and manual choke	<table border="1"> <thead> <tr> <th>Maximum Secondary</th> <th>Maximum Primary</th> <th>Coil Index</th> <th>Minimum Coil Test</th> <th>Gap Index</th> </tr> </thead> <tbody> <tr> <td>5500</td> <td>1.2</td> <td>75</td> <td>33</td> <td>70</td> </tr> </tbody> </table>			Maximum Secondary	Maximum Primary	Coil Index	Minimum Coil Test	Gap Index	5500	1.2	75	33	70
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5500	1.2	75	33	70										
Float level setting	Parallel with face of casting													
Carburetor orifice plug	Hole size - .048". Use a #56 drill as gage.													
Inlet needle seat	.053" - .050". Use a #55 drill as gage.													
Propeller gear ratio	13:23													
Propeller drive pin	Part No. 307949 3/16" x 1-25/64" stainless steel													
Propeller	3 Blade, 8-1/8" dia. x 8" Pitch													

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

CLEARANCE CHART

POWER HEAD			
Piston and wrist pin - loose end	.0005 Max. - .0000 Min.	Driveshaft - upper	.0020 Max. - .0003 Min.
Piston ring gap	.017 Max. - .007 Min.	Propeller on shaft	.009 Max. - .007 Min.
Piston ring groove clearance	.0035 Max. - .001 Min.	Front gear to gearcase bearing	.0022 Max. - .0010 Min.
Cylinder and piston	.0050 Max. - .0035 Min.	Front gear to front bushing	Press fit
Crankshaft bearings		Front gear bushing to propeller shaft	.0015 Max. - .0005 Min.
Upper	Needle bearing		
Center	Needle bearing		
Lower	Needle bearing		
Connecting rod bearings		Rear reverse gear to rear bushing	.0020 Max. - .0005 Min.
Piston end	Needle bearing		
Crankshaft end	Needle bearing		
LOWER UNIT			
Gearcase head and propeller shaft	.0020 Max. - .0010 Min.	Rear gear bushing to propeller shaft	.0015 Max. - .0005 Min.

TORQUE CHART

POWER HEAD		STANDARD SCREWS		
Flywheel nut	40-45 Foot-pounds		Inch-Pounds	Foot-Pounds
Connecting rod screws	90-100 Inch-pounds	No. 6	7-10	
Cylinder head screws	96-120 Inch-pounds	No. 8	15-22	
Crankcase to cylinder screws		No. 10	25-35	2-3
Upper	120-145 Inch-pounds	No. 12	35-40	3-4
Center	120-145 Inch-pounds	1/4"	60-80	5-7
Lower	120-145 Inch-pounds	5/16"	120-140	10-12
Spark plugs	17-1/2 - 20-1/2 Foot-pounds	3/8"	220-240	18-20
LOWER UNIT		<p>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.</p>		
Side mount nuts - upper & lower	150 to 170 Inch-pounds (12 to 14 Foot-pounds)	<input type="checkbox"/> NOTE		
Slip clutch propeller	70 Foot-pounds	<p>Re-check torque on cylinder head screws and spark plugs after motor test has been completed and motor has cooled comfortable to touch.</p>		