

SPECIFICATIONS

Model Numbers 20R72 - Standard length (15" transom)
 20RL72 - 5" longer (20" transom)
 *Horsepower (B.I.A.-certified) 20 hp at 4500 rpm
 Full throttle operating range 4000 to 5000 rpm
 Tank test with test wheel Part Number 376913 4650 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 385338
 .030" oversize Part Number 385348

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 309935068
 Inlet needle seat065" - .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"
 stainless steel

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) 20R72-81 lbs, 20RL72-83 lbs.
 Fuel tank (net) 11 lbs.
 Fuel capacity 6 gallons
 Starter Manual Self-rewinding
 Ignition Flywheel magneto
 Spark plug AC-M42K, Champion J4J, - 14 mm
 Spark plug gap030 inch
 Spark plug torque 17-1/2 - 20-1/2 Foot-pounds
 Breaker point gap020 inch
 Condenser Part Number 580422
 Capacity25 - .29 Mfd.
 Part No. 580197 Coil Test Specifications -

Old Stevens Tester

Switch	Index Reading
B	1.5 - 2.0

New Stevens Tester Model No. M.A.-75

Switch	Index Adjustment
A	21

Merc-O-Tronic

Operating Amperage	Primary Resistance		Secondary Continuity	
	Min.	Max.	Min.	Max.
1.5	.5	.6	45	55

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

Graham Tester Model 51

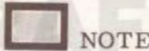
Maximum Secondary	Maximum Primary	Coil Index	Minimum Coil Test	Gap Index
8000	1.3	75	37	65

CLEARANCE CHART**POWER HEAD**

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

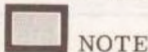
LOWER UNIT

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	.0025 Max. - .0015 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

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.



NOTE

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
Crankcase to cylinder screws	
Upper	110-130 Inch-pounds
Center	120-130 Inch-pounds
Lower	110-130 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	50-60 Inch-pounds (5-7 Foot-pounds)
Side mounts, upper and lower nuts	150-170 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	170-190 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	200-240 lbs.
*Standard length lower unit.	