Specifications - 2, 2 Com., 4, 4 Com., and 4 Weedless

General

	2 and 2 Com.	4, 4 Com. and 4 Weedless
Full Throttle Operating Range	4200 - 4800 rpm	4000 - 5000 rpm
Idle rpm in Forward Gear	650 rpm	600 rpm
Test Wheel and rpm	Part No. 316021 (4-9/16" dia. x 5/8" wide) 3900 rpm	4 and 4 Com. - Part No. 317738 (5-1/4" dia. x 11/16" wide) 4550 rpm 4 Weedless - Part No. 310621 4-9/16" dia. x 5/8" wide) 3800 rpm

Powerhead

Bore	1.5625" Bore x 1.375" Stroke (39,69 x 34,93 mm)	1.5625" Bore x 1.375" Stroke (39,69 x 34,93 mm)
Piston Displacement	2.64 cu. in. (43 cm^3)	5.28 cu. in. (87 cm^3)
Width of Ring	0.0625" - 0.615" (1,588 - 1,562 mm)	0.0625" - 0.615" (1,588 - 1,562 mm)
Crankshaft Size		
Top Journal	0.7502" - 0.7497" (19,055 - 19,042 mm)	0.7510" - 0.7506" (19,075 - 19,063 mm)
Center Journal		0.6690" - 0.6685" (16,993 - 16,980 mm)
Bottom Journal	0.7502" - 0.7497" (19,055 - 19,042 mm)	0.7502" - 0.7498" (19,055 - 19,045 mm)
Connecting Rod Crank Pin	0.6700" - 0.6695" (17,018 - 17,005 mm)	0.6700" - 0.6695" (17,018 - 17,005 mm)
+Standard Bore Size	1.5675" - 1.5668" (39,815 - 39,800 mm)	1.5650" - 1.5643" (39,751 - 39,733 mm)

+To determine correct bore size for oversize pistons, merely add oversize dimension to standard bore size.

Ignition System

Ignition	Flywheel magneto	Flywheel magneto
Spark Plug		
Champion	J6J or RJ6J - 14 mm	L86 or RL86 - 14 mm
AC	AC - M44C	
Spark Plug Gap	0.030" (0,76 mm)	0.030" (0,76 mm)
Breaker Point Gap	0.020" (0,51 mm)	0.020" (0,51 mm)
Condenser	Part No. 580321 - 0.18 - 0.22 Mfd.	Part No. 580321 - 0.18 - 0.22 Mfd.
Ignition Coil	Part No. 582370	Part No. 582370

Coil Part No. 582370

Stevens Tester Model ST-75

Normal Polarity (Switch Setting Standard)	2,2

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

Switch	Index Adjustment
B	22

Merc-O-Tronic

Operating Amperage	Primary Resistance		Secondary Continuity	
	Min.	Max.	Min.	Max.
1,6	0,5	0,7	35	45

Graham Tester Model 51

Maximum Secondary	Maximum Primary	Coil Index	Minimum Coil Test	Max. Gap Index
5500	1,2	75	33	75

Coil Ohmmeter Test

Primary (Low Ohms) ..... 0.6 Ω ± 0.2
Secondary (High Ohms) ..... 4200 Ω ± 200

	2 and 2 Com.	4, 4 Com. and 4 Weedless
Fuel System		
Carburetion	Single barrel float feed, with high and low speed adjustments, manual choke	Single barrel float feed, fixed high speed adjustable low speed, manual choke
Float Level Setting	Between steps on gauge Part No. 324891	Between steps on gauge part No. 324891
Float Drop Setting	1.125" - 1.500" (28 - 38 mm)	1.125" - 1.500" (28 - 38 mm)
Clearance Chart		
Powerhead		
Piston Ring Gap	0.025" - 0.015" (0,64 - 0,38 mm)	0.015" - 0.005" (0,38 - 0,13 mm)
Piston Ring Groove	0.0040" - 0.0020" (0,10 - 0,05 mm)	0.0040" - 0.0020" (0,10 - 0,05 mm)
Cylinder and Piston	0.0055" - 0.0043" (0,140 - 0,109 mm)	0.0030" - 0.0018" (0,076 - 0,046 mm)
Connecting Rod - Piston End	0.0011" - 0.0004" (0,028 - 0,010 mm)	Needle Bearings
Lower Unit		
Driveshaft and Bushing in Gearcase	0.0028" - 0.0010" (0,071 - 0,025 mm)	Weedless models only 0.003" - 0.001" (0,08 - 0,03 mm)
Gearcase Head and Propeller Shaft	0.0022" - 0.0007" (0,056 - 0,018 mm)	
Propeller on Shaft	0.0057" - 0.0022" (0,145 - 0.056 mm)	Weedless models - 0.0053" - 0.0020" (0,135 - 0,051 mm) 4 and 4 Com. - 0.0067" - 0.0022" (0,170 - 0,056 mm)
Gearcase Bushing on Propeller Shaft	0.0022" - 0.0007" (0,056 - 0,018 mm)	
Gearcase Head and Bushing Assembly		0.0015" - 0.0005" (0,038 - 0,013 mm) Weedless models only
Torque Chart		
Powerhead		
Flywheel Nut	20 - 25 ft. lbs. (30 - 34 N·m)	30 - 40 ft. lbs. (40 - 54 N·m)
Connecting Rod Screws	60 - 66 in. lbs. (7,0 - 7,5 N·m)	60 - 66 in. lbs. (7,0 - 7,5 N·m)
Cylinder Head Screws	60 - 80 in. lbs. (7,0 - 9,0 N·m)	60 - 80 in. lbs. (7,0 - 9,0 N·m)
Crankcase to Main Bearing Screws Upper, Center, Lower		60 - 80 in. lbs. (7,0 - 9,0 N·m)
Bearing Housing to Cylinder Screws	60 - 80 in. lbs. (7,0 - 9,0 N·m)	
Spark Plug	17.5 - 20.5 ft. lbs. (24 - 27 N·m)	17.5 - 20.5 ft. lbs. (24 - 27 N·m)
Gearcase Mounting Screws	60 - 80 in. lbs. (7 - 9 N·m)	60 - 80 in. lbs. (7 - 9 N·m)

Specifications - 4.5, 6 Com., 6 and 7.5

General

	4.5	6 Com.	6 and 7.5
Full Throttle Operating Range	4500 - 5500 rpm	4000 - 5000 rpm	4500 - 5500 rpm
Idle rpm in Forward Gear	600 rpm	500 rpm	650 rpm
Test Wheel and rpm	Part No. 390123 (5-3/4" dia. x 5/8" wide) 5100 rpm	Part No. 379673 (5-3/4" dia. x 3/4" wide) 4500 rpm	Part No. 390239 5-3/4" dia. x 1-1/8" wide) 4900 rpm

Powerhead

Bore and Stroke	1.5625" Bore x 1.375" Stroke (39,69 mm x 34,93 mm)	1.9375" Bore x 1.500" Stroke (49,21 mm x 38,10 mm)	1.9375" Bore x 1.700" Stroke (49,21 mm x 43,18 mm)
Piston Displacement	5.28 cu. in. (87 cm^3)	8.84 cu. in. (145 cm^3)	10.0 cu. in. (164 cm^3)
Width of Ring	0.0625" - 0.0615" (1,588 - 1,562 mm)	0.0935" - 0.925" (2,375 - 2,350 mm)	0.0625" - 0.0615" (1,588 - 1,562 mm)
Crankshaft Size			
Top Journal	0.7510" - 0.7505" (19,075 - 19,063 mm)	0.8080" - 0.8075" (20,523 - 20,510 mm)	0.87725" - 0.87225" (22,282 - 22,155 mm)
Center Journal	0.6690" - 0.6685" (16,993 - 16,980 mm)	0.8080" - 0.8075" (20,523 - 20,510 mm)	0.81545" - 0.8104" (20,712 - 20,585 mm)
Bottom Journal	0.7502" - 0.7498" (19,055 - 19,045 mm)	0.8080" - 0.8075" (20,523 - 20,510 mm)	0.7562" - 0.7498" (19,207 - 19,045 mm)
Connecting Rod Crank Pin	0.6700" - 0.6695" (17,018 - 17,005 mm)	0.6700" - 0.6695" (17,018 - 17,005 mm)	0.6700" - 0.6695" (17,018 - 17,005 mm)
+Standard Bore Size	1.5650 " - 1.5643" (39,751 - 39,733 mm)	1.9380" - 1.9373" (49,23 - 49,20 mm)	1.9380" - 1.9373" (49,23 - 49,20 mm)

+To determine correct bore size for oversize pistons, merely add oversize dimension to standard bore size.

Ignition System

Ignition	Flywheel magneto, breakerless C.D.	Flywheel magneto, breakerless C.D.	Flywheel magneto, breakerless C.D.
Spark Plug			
Champion	L77J4 or QL77J4 - 14 mm	L77J4 or QL77J4 - 14 mm	L77J4 or QL77J4 - 14 mm
NGK	B9HS-10	B9HS-10	B9HS-10
Spark Plug Gap	0.040" (1,0 mm)	0.040" (1,0 mm)	0.040" (1,0 mm)
Ignition Coil	Part No. 582106	Part No. 582106	Part No. 582106

Ignition Coil Test Specifications		
Stevens Model ST-75		
Reverse Polarity (Switch Setting CD) 1.1		
Stevens Tester Model M.A.-75 or M.A.-80		
Switch **A	Index Adjustment 20	
Merc-O-Tronic with Capacitor Discharge Adapter Model 55-980		
Operating Amperage	Primary Resistance	Secondary Continuity
1.0	0.1 Ohm OR LESS	5 Approx

**Use Model CD-1 Adapter Red test clip to orange/black Black test clip to orange	
Graham Tester Model 51	
Maximum Secondary	400 ohms
Primary Continuity, Point Test Scale	0.1 ohm, maximum
Maximum Primary	0.4 ohm
Coil Index	50
Coil Test Minimum AMPLIFIED	26 (With secondary circuit "open.") Hi tension lead disconnected
Gap Index	50 (coil must fire spark gap on tester at this setting.)
Ignition Coil Ohmmeter Test	
Primary (Low Ohms)	Secondary (High Ohms)
0.1 ± 0.05	275 ± 50

Ignition Component Tests						
	Resistance		Ground Test		Output	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	575 ± 75 Ω	High ohms scale	∞	(–), 500	230
Sensor coil	Low ohms scale	40 ± 10 Ω	Low ohms scale	∞	S, 5	0,3
Power pack					(–), 500	180

	4.5	6 Com.	6 and 7.5

Fuel System

Carburetion	Single barrel, float feed, fixed high speed adjustable low speed, manual choke	Single barrel, float feed, fixed high speed adjustable low speed, manual choke	Single barrel, float feed, fixed high speed adjustable low speed, manual choke
Float Level Setting	Between steps on gauge Part No. 324891	Between steps on gauge Part No. 324891	Between steps on gauge Part No. 324891
Float Drop Setting	1.125" - 1.500" (28 - 32 mm)	1.125" - 1.500" (28 - 32 mm)	1.125" - 1.500" (28 - 32 mm)

Clearance Chart

Piston Ring Gap	0.015" - 0.005" (0,38 - 0,127 mm)	0.015" - 0.005" (0,38 - 0,127 mm)	0.015" - 0.005" (0,38 - 0,127 mm)
Piston Ring Groove	0.0040" - 0.0020" (0,102 - 0,051 mm)	0.0035" - 0.0010" (0,089 - 0,025 mm)	0.0035" - 0.0020" (0,089 - 0,051 mm)
Cylinder and Piston	0.0030" - 0.018" (0,076 - 0,046 mm)	0.0030" - 0.0018" (0,076 - 0,046 mm)	0.0030" - 0.0018" (0,076 - 0,046 mm)
Crankshaft Bushings			
Upper, Center, Lower		0.0025" - 0.0015" (0,064 - 0,038 mm)	
Connecting Rod Bearings			
Piston End		0.0010" - 0.0003" (0,025 - 0,008 mm)	
Piston and Wrist Pin			
Loose End		0.0007" - 0.0000" (0,018 - 0,000 mm)	

Torque Chart

Powerhead

Flywheel Nut	30 - 40 ft. lbs. (40 - 54 N·m)	40 - 45 ft. lbs. (54 - 60 N·m)	40 - 50 ft. lbs. (54 - 67 N·m)
Connecting Rod Screws	60 - 66 in. lbs. (7,0 - 8,0 N·m)	60 - 66 in. lbs. (7,0 - 8,0 N·m)	60 - 66 in. lbs. (7,0 - 8,0 N·m)
Cylinder Head Screws	60 - 80 in. lbs. (7,0 - 9,0 N·m)	60 - 80 in. lbs. (7,0 - 9,0 N·m)	12 - 14 ft. lbs. (16,0 - 19,0 N·m)
Crankcase to Main Bearing Screws			
Upper, Center, Lower	60 - 80 in. lbs. (7,0 - 9,0 N·m)	60 - 80 in. lbs. (7,0 - 9,0 N·m)	12 - 14 ft. lbs. (16,0 - 19,0 N·m)
Spark Plugs	17.5 - 20.5 ft. lbs. (24 - 27 N·m)	17.5 - 20.5 ft. lbs. (24 - 27 N·m)	17.5 - 20.5 ft. lbs. (24 - 27 N·m)
Power Pack Mounting Screws	48 - 60 in. lbs. (5,5 - 7,0 N·m)	48 - 60 in. lbs. (5,5 - 7,0 N·m)	48 - 60 in. lbs. (5,5 - 7,0 N·m)
Ignition Coil Mounting Screws	60 - 80 in. lbs. (7,0 - 9,5 N·m)	60 - 80 in. lbs. (7,0 - 9,5 N·m)	60 - 80 in. lbs. (7,0 - 9,5 N·m)

Lower Unit

Gearcase Mounting Screws			
Front Screws	60 - 80 in. lbs. (7 - 9 N·m)	60 - 80 in. lbs. (7 - 9 N·m) All screws	60 - 80 in. lbs. (7 - 9 N·m)
Rear Screws	10 - 12 ft. lbs. (14 - 16 N·m)		10 - 12 ft. lbs. (14 - 16 N·m)

Specifications - 9.9, 10 Com., and 15

General

	9.9 and 15	10 Com.
Full Throttle Operating Range	9.9-4500 - 5500 rpm 15-5500 - 7000 rpm	4000 - 5000 rpm
Idle rpm in Forward Gear	650 rpm	650 rpm
Test Wheel and rpm	Part No. 386537 (7" dia. x 1" wide) 9.9-5500 rpm 15-6200 rpm	Part No. 377455 (5-3/4" dia. x 1-1/8" wide) 5000 rpm

Powerhead

Bore and Stroke	2.188" Bore x 1.760" Stroke (55,58 x 44,70 mm)	2.188" Bore x 1.760" Stroke (55,58 x 44,70 mm)
Piston Displacement	13.20 cu. in.(216 cm^3)	13.20 cu. in. (216 cm^3)
Width of Ring		
Upper	0.0700" - 0.0695" (1,788 - 1,765 mm)	0.0700" - 0.0695" (1,788 - 1,765 mm)
Lower	0.0615" - 0.0625" (1,562 - 1,588 mm)	0.0615" - 0.0625" (1,562 - 1,588 mm)
Crankshaft Size		
Top Journal	0.8762" - 0.8757" (22,255 - 22,243 mm)	0.8762" - 0.8757" (22,255 - 22,243 mm)
Center Journal	0.8125" - 0.8120" (20,638 - 20,625 mm)	0.8125" - 0.8120" (20,638 - 20,625 mm)
Bottom Journal	0.8125" - 0.8120" (20,638 - 20,625 mm)	0.8125" - 0.8120" (20,638 - 20,625 mm)
Connecting Rod Crankpin	1.0635" - 1.0630" (27,013 - 27,000 mm)	1.0635" - 1.0630" (27,013 - 27,000 mm)
+Standard Bore Size	2.1883" - 2.1875" (55,58 - 55,56 mm)	2.1883" - 2.1875" (55,58 - 55,56 mm)

+To determine correct bore size for oversize pistons, merely add oversize dimension to standard bore size.

Ignition System

Ignition	Flywheel magneto, breakerless C.D.	Flywheel magneto, breakerless C.D.
Spark Plug		
Champion	L77J4 or QL77J4	L78V or QL78V
NGK	B9HS-10	B9HS-10
Spark Plug Gap	0.040" (1,0 mm)	0.040" (1,0 mm)
Ignition Coil	Part No. 582106	Part No. 582106

Ignition Coil Test Specifications		
Stevens Model ST-75		
Reverse Polarity (Switch Setting CD) 1.1		
Stevens Tester Model M.A.-75 or M.A.-80		
Switch **A	Index Adjustment 20	
Merc-O-Tronic with Capacitor Discharge Adapter Model 55-980		
Operating Amperage	Primary Resistance	Secondary Continuity
1.0	0.1 Ohm OR LESS	5 Approx

**Use Model CD-1 Adapter Red test clip to orange/black Black test clip to orange	
Graham Tester Model 51	
Maximum Secondary	400 ohms
Primary Continuity, Point Test Scale	0.1 ohm, maximum
Maximum Primary	0.4 ohm
Coil Index	50
Coil Test Minimum AMPLIFIED	26 (With secondary circuit "open.") Hi tension lead disconnected
Gap Index	50 (coil must fire spark gap on tester at this setting.)
Ignition Coil Ohmmeter Test	
Primary (Low Ohms)	Secondary (High Ohms)
0.1 ± 0.05	275 ± 50

Ignition Component Tests						
	Resistance		Ground Test		Output	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	575 ± 75 Ω	High ohms scale	∞	(–), 500	230
Sensor coil	Low ohms scale	40 ± 10 Ω	Low ohms scale	∞	S, 5	0,3
Power pack					(–), 500	180

Electrical System

Electrical System	60 watt 12 V AC
AC Stator Resistance	Part No. 581690
Trailing Coil	0.65 ± 0.1 ohms
Leading Coil	0.52 ± 0.1 ohms

Fuel System

Carburetion	Single barrel, float feed, fixed high speed adjustable low speed, manual choke	Single barrel, float feed, fixed high speed adjustable low speed, manual choke
Float Level Setting	Between steps on gauge Part No. 324891	Between steps on gauge Part No. 324891
Float Drop Setting	1.125" - 1.500" (28 - 32 mm)	1.125" - 1.500" (28 - 32 mm)

Clearance Chart

Powerhead

Piston Ring Gap	0.015" - 0.005" (0,38 - 0,13 mm)	0.015" - 0.005" (0,38 - 0,13 mm)
Piston Ring Clearance, Lower	0.0035" - 0.0025" (0,089 - 0,064 mm)	0.0035" - 0.0025" (0,089 - 0,064 mm)
Cylinder and Piston	0.0038" - 0.0025" (0,097 - 0,064 mm)	0.0038" - 0.0025" (0,097 - 0,064 mm)

Lower Unit

Propeller Shaft in Front Gear Bushing	0.0087" - 0.0002" (0,221 - 0,005 mm)	0.0015" - 0.0005" (0,038 - 0,013 mm)
Propeller Shaft to Reverse Gear Bushing		0.0015" - 0.0005" (0,038 - 0,013 mm)
Gearcase Mounting Screws	10 - 12 ft. lbs. (14 - 16 N·m)	10 - 12 ft. lbs. (14 - 16 N·m)
Slip Clutch Propeller	85 ft. lbs. min. (115 N·m)	60 ft. lbs. min. (80 N·m)
Gearcase Mounting Screws	10 - 12 ft. lbs. (14 - 16 N·m)	10 - 12 ft. lbs. (14 - 16 N·m)

Torque Chart

Powerhead

Flywheel Nut	45 - 50 ft. lbs. (60 - 70 N·m)	45 - 50 ft. lbs. (60 - 70 N·m)
Connecting Rod Screws	48 - 60 in. lbs. (5,0 - 7,0 N·m)	48 - 60 in. lbs. (5,0 - 7,0 N·m)
Cylinder Head Screws	18 - 20 ft. lbs. (24 - 27 N·m)	18 - 20 ft. lbs. (24 - 27 N·m)
Crankcase to Main Bearing Screws		
Upper, Center, Bottom	12 - 14 ft. lbs. (16 - 19 N·m)	12 - 14 ft. lbs. (16 - 19 N·m)
Spark Plug	17.5 - 20.5 ft. lbs. (24 - 27 N·m)	17.5 - 20.5 ft. lbs. (24 - 27 N·m)
Electric Start Thru-Bolts	30 - 40 in. lbs. (4 - 5 N·m)	
Starter Motor Pinion Nut	150 - 170 in. lbs. (17 - 19 N·m)	
Power Pack Mounting Screws	48 - 60 in. lbs. (5 - 7 N·m)	48 - 60 in. lbs. (5 - 7 N·m)
Ignition Coil Mounting Screws	60 - 80 in. lbs. (7,0 - 9,5 N·m)	60 - 80 in. lbs. (7,0 - 9,5 N·m)
Manual Starter Assembly Screw	24 - 26 ft. lbs. (32 - 36 N·m)	24 - 26 ft. lbs. (32 - 36 N·m)

Mid-Section

Upper Mounts	60 - 80 in. lbs. (7 - 9 N·m)	12 - 14 ft. lbs. (17 - 19 N·m)
Pilot Shaft to Steering Bracket Screws	8 - 10 ft. lbs. (11 - 15 N·m)	60 - 80 in. lbs. (7 - 9 N·m)

Specifications - 20, 25, 25 Com., 35, and 40 Com.

General

	20, 25, 25 Com. and 35	40 Com.
Full Throttle Operating Range	20, 25 and 25 Com.- 4500 - 5500 rpm 35-5200 - 5800 rpm	4000 - 5000 rpm
Idle rpm in Forward Gear	650 rpm	
Test Wheel and rpm	20, 25 and 25 Com.- Part No. 388880 (7" dia. x 1" wide) 35-Part No. 386891 (7" dia. x 2-3/16" wide) 20-4650 rpm 25 and 25 Com.-5200 rpm 35-5300 rpm	Part No. 378566 (7" dia. x 1-5/8" wide) 4500 rpm

Powerhead

Bore and Stroke	3.000" Bore x 2.250" Stroke (76,20 x 57,15 mm)	3.1875" Bore x 2.7500" Stroke (80, 90 x 69,85 mm)
Piston Displacement	31.8 cu. in. (521 cm^3)	43.9 cu. in. (719 cm^3)
Width of Ring		
Upper	0.0900" - 0.0895" (2,286 - 2,273 mm)	0.0900" - 0.0895" (2,286 - 2,273 mm)
Lower	0.0625" - 0.0615" (1,588 - 1,562 mm)	0.0625" - 0.0615" (1,588 - 1,562 mm)
Crankshaft Size		
Top Journal	1.2510" - 1.2515" (31,775 - 31,788 mm)	1.4979" - 1.4974" (38,046 - 38,034 mm)
Center Journal	1.1805" - 1.1810" (29,985 - 29,997 mm)	1.3752" - 1.3748" (34,930 - 34,620 mm)
Bottom Journal	0.9842" - 0.9846" (24,999 - 25,009 mm)	1.1815" - 1.1810" (30,017 - 29,997 mm)
Connecting Rod Crankpin	1.1828" - 1.1823" (30,043 - 30,030 mm)	1.1828" - 1.1823" (30,043 - 30,030 mm)
+Standard Bore Size	3.0005" - 2.9995" (76,21 - 76,19 mm)	3.1906" - 3.1894" (80,98 - 80,95 mm)

+To determine correct bore size for oversize pistons, merely add oversize dimension to standard bore size.

Ignition System

Ignition	Flywheel magneto, breakerless C.D.	Low tension magneto
Spark Plug		
Champion	L77J4 or QL77J4	UL81J or RL82
NGK	B9HS-10	
Spark Plug Gap	0.040" (1,0 mm)	0.030" (0,07 mm)
Breaker Point Gap		0.020" (0,50 mm)
Driver Coil		1.45 ± 0.4 ohms
Condenser		Part No. 581419
Capacity		0.25 - 0.29 Mfd
Ignition Coil	Part No. 582106	Part No. 581786

Ignition Coil Test Specification - Part No. 582106

Ignition Coil Test Specifications		
Stevens Model ST-75		
Reverse Polarity (Switch Setting CD) 1.1		
Stevens Tester Model M.A.-75 or M.A.-80		
Switch **A	Index Adjustment 20	
Merc-O-Tronic with Capacitor Discharge Adapter Model 55-980		
Operating Amperage	Primary Resistance	Secondary Continuity
1.0	0.1 Ohm OR LESS	5 Approx

**Use Model CD-1 Adapter Red test clip to orange/black Black test clip to orange	
Graham Tester Model 51	
Maximum Secondary	400 ohms
Primary Continuity, Point Test Scale	0.1 ohm, maximum
Maximum Primary	0.4 ohm
Coil Index	50
Coil Test Minimum AMPLIFIED	26 (With secondary circuit "open.") Hi tension lead disconnected
Gap Index	50 (coil must fire spark gap on tester at this setting.)
Ignition Coil Ohmmeter Test	
Primary (Low Ohms)	Secondary (High Ohms)
0.1 ± 0.05	275 ± 50

Ignition Coil Test Specification - Part No. 581786

Tester . . . . . Stevens ST-75
Reverse polarity (switch setting standard) 1,3
Tester . . . . Stevens Tester Model M.A.-75 or M.A.-80 with M.A.-14 Adapter in Series with High Tension Lead
Switch . . . . . B
Index adjustment 25
Tester . . . . . Merc-O-Tronic with Capacitor Discharge Adapter Model 55-980
Operating amperage 1,7
Primary resistance . . . . 0,8 Min.-1,2 Max.
Secondary continuity . . . 60 Min.-70 Max.
Tester . . . . . Graham Model 51
Maximum secondary . . . . . 20,000 ohms
Maximum primary . . . . . 14,0 ohms
Coil index 50
Coil test minimum amplifier . . . . 24 (With secondary circuit "open.") Hi tension lead disconnected
Gap index . . . 45 (Coil must fire spark gap on tester at this setting.)
Coil Ohmmeter Test . . . Primary (Low Ohms)
Secondary (High Ohms) 13,500 ± 1500 ohms

Ignition Component Tests - 20, 25, 25 Com. and 35						
	Resistance		Ground Test		Output	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	575 ± 75 Ω	High ohms scale	∞	(–), 500	230
Sensor coil	Low ohms scale	40 ± 10 Ω	Low ohms scale	∞	S, 5	0.3
Power pack	———	———	———	———	(–), 500	180

Electrical System

	20, 25, 25 Com. and 35	40 Com.
Alternator System		
Electric Start	5 amp flywheel alternator	
Manual Start	60 watt AC at 12 V	

Fuel System

Carburetion	Single barrel, float feed fixed high speed adjustable low speed, manual choke	Single barrel, float feed, fixed high speed adjustable low speed, manual choke
Float Level Setting	Between steps on gauge Part No. 324891	Between steps on gauge Part No. 324891
Float Drop Setting	1.125" - 1.625" (28 - 41 mm)	1.125" - 1.625" (28 - 41 mm)

Clearance Chart

Powerhead

Piston Ring Gap	0.017" - 0.007" (0,43 - 0,18 mm)	0.017" - 0.007" (0,43 - 0,18 mm)
Piston Ring Groove Clearance, Lower	0.0040" - 0.0015" (0,102 - 0,038 mm)	0.0040" - 0.0015" (0,102 - 0,038 mm)
Cylinder and Piston	0.0065" - 0.0035" (0,165 - 0.089 mm)	0.0050" - 0.0030" (0,127 - 0,076 mm)
Crankshaft End Play	0.025" - 0.000" (0,635 - 0,000 mm)	0.011" - 0.003" (0,028 - 0,076 mm)

Lower Unit

Propeller Shaft in Front Gear Bushing	0.0020" - 0.0010" (0,051 - 0,025 mm)	0.0020" - 0.0010" (0,051 - 0,025 mm)
Rear Reverse Gear to Rear Bushing	0.0020" - 0.0005" (0,051 - 0,013 mm)	0.0020" - 0.0005" (0,051 - 0,013 mm)
Reverse Gear Bushing to Propeller Shaft	0.0015" - 0.0005" (0,038 - 0,013 mm)	0.0015" - 0.0005" (0,038 - 0,013 mm)
Propeller on Shaft at Drive Pin Hole	0.007" - 0.003" (0,018 - 0,076 mm)	
Propeller on Shaft-Above the Shoulder	0.0069" - 0.0034" (0,17 - 0,086 mm)	

Torque Chart

Powerhead

Flywheel Nut	100 - 105 ft. lbs. (135 - 140 N·m)	100 - 105 ft. lbs. (136 - 140 N·m)
Connecting Rod Screws	29 - 31 ft. lbs. (40 - 42 N·m)	29 - 31 ft. lbs. (40 - 42 N·m)
Cylinder Head Screws	18 - 20 ft. lbs. (24 - 27 N·m)	14 - 16 ft. lbs. (19 - 22 N·m)
Crankcase to Main Bearing Screws		
Upper, Center, Bottom	14 - 16 ft. lbs. (19 - 22 N·m)	Upper and lower-150 - 170 in. lbs. (16 - 18 N·m) Center-162 - 168 in. lbs. (18 - 19 N·m)
Powerhead to Exhaust Housing Screws	16 - 18 ft. lbs. (19 - 24 N·m)	5-7 ft. lb. (7-9 N·m)
Electric Starter Thru-Bolts	60 - 80 in. lbs. (7 - 9 N·m)	
Electric Starter Motor Pinion Nut	20 - 25 ft. lbs. (27 - 34 N·m)	
Spark Plug	17.5 - 20.5 ft. lbs. (24 - 27 N·m)	17.5 - 20.5 ft. lbs. (24 - 27 N·m)
Manual Starter Assembly Screws	8 - 10 ft. lbs. (11 - 14 N·m)	8 - 10 ft. lbs. (11 - 14 N·m)
Power Pack Mounting Screws	48 - 60 in. lbs. (5 - 7 N·m)	
Ignition Coil Mounting Screws	60 - 80 in. lbs. (7 - 9 N·m)	

Lower Unit

Pilot Shaft to Steering Bracket	10 - 12 ft. lbs. (14 - 16 N·m)	10 - 12 ft. lbs. (14 - 16 N·m)
*Pull at Propeller Shaft for Tilt Up	30 - 40 lbs. (14 - 18 kg)	30 - 40 lbs. (14 - 18 kg)
*Pull at Propeller Shaft to Overcome Reverse Lock	150 - 250 lbs. (68 - 113 kg)	260 - 310 lbs. (127 - 140 kg)
Gearcase Mounting Screws	10 - 12 ft. lbs. (14 - 16 N·m)	10 - 12 ft. lbs. (14 - 16 N·m)

*Standard length models

Specifications - 50, 60, 55, 55 Com., 70, and 75

General

	50 and 60	55 and 55 Com.	70 and 75
Full Throttle Operating Range	50-4500 - 5500 60-5000 - 6000	4500 - 5500	70-4500 - 5500 75-5200 - 5800
Idle rpm in Forward Gear	700 - 750 rpm	700 - 750 rpm	700 - 750 rpm
Test Wheel and rpm	Part No. 387635 (9-7/8" dia. x 2-1/4" wide) 60-5600 rpm	Part No. 382861 (10" dia. x 2" wide) 5200 rpm	Standard-Part No. 386950 (10" dia. x 2-5/16" wide) Long shaft-Part No. 386665 (11-3/16" dia. x 1-27/32" wide) 70-5000 rpm 75-5200 rpm

Powerhead

Bore and Stroke	3.1875" Bore x 2.820" Stroke (80,96 - 71,63 mm)	3.1875" Bore x 2.820" Stroke (80,96 - 71,63 mm)	3.000" Bore x 2.3437" Stroke (76,20 - 59,53 mm)
Piston Displacement	45 cu. in. (737 cm^3)	45 cu. in. (737 cm^3)	(49.7 cu. in. (814 cm^3)
Width of Ring			
Upper	0.0900" - 0.0895" (2,286 - 2,273 mm)	0.0900" - 0.0895" (2,286 - 2,273 mm)	0.0900" - 0.0895" (2,286 - 2,273 mm)
Lower	0.0625" - 0.0615" (1,588 - 1,562 mm)	0.0625" - 0.0615" (1,588 - 1,562 mm)	0.0625" - 0.0615" (1,588 - 1,562 mm)
Crankshaft Size			
Top Journal	1.4979" - 1.4974" (38,047 - 38,034 mm)	1.4979" - 1.4974" (38,047 - 38,034 mm)	1.4979" - 1.4974" (38,047 - 38,034 mm)
Center Journal	1.3752" - 1.3748" (34,930 - 34,920 mm)	1.3752" - 1.3748" (34,930 - 34,920 mm)	1.3752" - 1.3748" (34,930 - 34,920 mm)
Bottom Journal	1.1815" - 1.1810" (30,110 - 29,997 mm)	1.1815" - 1.1810" (30,110 - 29,997 mm)	1.1815" - 1.1810" (30,110 - 29,997 mm)
Connecting Rod Crankpin	1.1828" - 1.1823" (30,043 - 30,030 mm)	1.1828" - 1.1823" (30,043 - 30,030 mm)	1.1828" - 1.1823" (30,043 - 30,030 mm)
+Standard Bore Size	3.1880" - 3.1870" (80,98 - 80,95 mm)	3.1880" - 3.1870" (80,98 - 80,95 mm)	2.995" - 3.005" (76,21 - 76,19 mm)

+To determine correct bore size for oversize pistons, merely add oversize dimension to standard bore size.

Ignition System

Ignition	Flywheel magneto, breakerless C.D.	Flywheel magneto, breakerless C.D.	Flywheel magneto, breakerless C.D.
Spark Plug			
Champion	L77J4 or QL77J4	L77J4 or QL77J4	L77J4 or QL77J4
AC	AC-M40FFX	AC-M40FFX	AC-M40FFX
Spark Plug Gap	0.040" (1,0 mm)	0.040" (1,0 mm)	0.040" (1,0 mm)
Ignition Coil	Part No. 582366	Part No. 582366	Part No. 582366

Ignition Coil Test Specifications - Part No. 582366

Stevens Model ST-75

Reverse Polarity (Switch Setting CD) 1.1

Stevens Tester Model M.A.-75 or M.A.-80

Switch . . . . . A (Use Model CD-1 Adapter - Red test clip to orange/black - Black test clip to orange

Index Adjustment 20

Merc-O-Tronic with Capacitor Discharge Adapter Model 55-980

Operating Amperage 1.0

Primary Resistance 0.1

Secondary Continuity . . . . . 5 approx.

Graham Tester Model 51

Maximum Secondary . . . . . 400 ohms

Maximum Primary . . . . . 0.4 ohm

Primary Continuity, Point Test Scale . . . . . 0.1 ohm max.

Coil Index 50

Coil Test Minimum AMPLIFIED . . . . . 26 (With secondary circuit "open") Hi tension lead disconnected

Gap Index . . . . . 50 (Coil must fire spark gap on tester at this setting)

Ignition Component Tests - 50, 55, 55 Com. and 60 Models

	Resistance		Ground Test		Output (Cranking)	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	575 ± 75 Ω (Manual start) 475 ± 75 Ω (Electric start)	High ohms scale	∞	(–), 500	230
Sensor coil	Low ohms scale	40 ± 10 Ω	High ohms scale	∞	S, 5	0,3
Power pack	———		———		(–), 500	180
Ignition coil primary	Low ohms scale	0,1 ± 0,05 Ω				
Secondary	High ohms scale	275 ± 50 Ω				

Ignition Component Tests - 70 and 75 Models						
	Resistance		Ground Test		Output (Cranking)	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	550 ± 75 Ω	High ohms scale	∞	(–), 500	220
Sensor coil	Low ohms scale	17 ± 5 Ω	Low ohms scale	∞	S, 5	0,4
Power pack		———		———	(–), 500	230
Ignition coil primary	Low ohms scale	0,1 ± 0,05 Ω				
Secondary	High ohms scale	275 ± 50 Ω				

Electrical System

	50 and 60	55 and 55 Com.	70 and 75
Alternator	5 amp-Flywheel alternator		6 amp-Flywheel alternator

Fuel System

Carburetion	Single barrel, float feed fixed high speed adjustable low speed, manual choke	Single barrel, float feed, fixed high speed adjustable low speed, manual choke	Single barrel, float feed, fixed high speed adjustable low speed, manual choke
Float Level Setting	Between steps on gauge Part No. 324891	Between steps on gauge Part No. 324891	Between steps on gauge Part No. 324891
Float Drop Setting	1.125" - 1.625" (28 - 41 mm)	1.125" - 1.625" (28 - 41 mm)	1.125" - 1.625" (28 - 41 mm)

Clearance Chart

Piston Ring Gap	0.017" - 0.007" (0,43 - 0,18 mm)	0.017" - 0.007" (0,43 - 0,18 mm)	0.017" - 0.007" (0,43 - 0,18 mm)
Piston Ring Groove Clearance - Lower	0.0040" - 0.0015" (0,102 - 0,038 mm)	0.0040" - 0.0015" (0,102 - 0,038 mm)	0.0040" - 0.0015" (0,102 - 0,038 mm)
Cylinder and Piston	0.0049" - 0.0018" (0,125 - 0,048 mm) at major dia.	0.0049" - 0.0018" (0,125 - 0,048 mm) at major dia.	0.0055" - 0.0045" (0,140 - 0,114 mm)
Forward Gear Bushing to Propeller Shaft	0.002" - 0.001" (0,05 - 0,03 mm)	0.002" - 0.001" (0,05 - 0,03 mm)	0.002" - 0.001" (0,05 - 0,03 mm)

Torque Chart

Flywheel Nut	80 - 85 ft. lbs. (110 - 115 N·m)	80 - 85 ft. lbs. (110 - 115 N·m)	100 - 105 ft. lbs. (135 - 140 N·m)
Connecting Rod Screws	29 - 31 ft. lbs. (40 - 42 N·m)	29 - 31 ft. lbs. (40 - 42 N·m)	29 - 31 ft. lbs. (40 - 42 N·m)
Cylinder Head Screws	18 - 20 ft. lbs. (24 - 27 N·m)	18 - 20 ft. lbs. (24 - 27 N·m)	18 - 20 ft. lbs. (24 - 27 N·m)
Crankcase to Cylinder Main Bearing Screws and Nuts Upper, Center, Bottom	18 - 20 ft. lbs. (24 - 27 N·m)	18 - 20 ft. lbs. (24 - 27 N·m)	18 - 20 ft. lbs. (24 - 27 N·m)
Spark Plugs	17.5 - 20.5 ft. lbs. (24 - 27 N·m)	17.5 - 20.5 ft. lbs. (24 - 27 N·m)	17.5 - 20.5 ft. lbs. (24 - 27 N·m)
Stator Screws	60 - 80 ft. lbs. (7 - 9 N·m)	60 - 80 in. lbs. (7 - 9 N·m)	48 - 60 in. lbs. (5 - 7 N·m)
Lower Journal Bearing Head Screws	96 - 120 in. lbs. (11 - 14 N·m)	96 - 120 in. lbs. (11 - 14 N·m)	96 - 120 in. lbs. (11 - 14 N·m)
Driveshaft Pinion Nut	40 - 45 ft. lbs. (54 - 60 N·m)	40 - 45 ft. lbs. (54 - 60 N·m)	40 - 45 ft. lbs. (54 - 60 N·m)
Starter Motor Thru-Bolts			
Prestolite	110 - 122 in. lbs. (12 -1 4 N·m)		110 - 122 in. lbs. (12 - 14 N·m)
Bosch	90 - 105 in. lbs. (11 - 12 N·m)		90 - 105 in. lbs. (11 - 12 N·m)
Starter Motor Pinion Nut			
Prestolite	25 - 30 ft. lbs. (34 - 40 N·m)		25 - 30 ft. lbs. (34 - 40 N·m)
Bosch	20 - 25 ft. lbs. (27 - 34 N·m)		20 - 25 ft. lbs. (27 - 34 N·m)
Power Pack Mounting Screws	48 - 60 in. lbs. (5 - 7 N·m)	48 - 60 in. lbs. (5 - 7 N·m)	48 - 60 in. lbs. (5 - 7 N·m)
Ignition Coil Mounting Screws	60 - 80 in. lbs. (7 - 9 N·m)	60 - 80 in. lbs. (7 - 9 N·m)	60 - 80 in. lbs. (7 - 9 N·m)
Pivot Shaft Nut (Long Shaft)	130 - 150 ft. lbs. (180 - 200 N·m)	130 - 150 ft. lbs. (180 - 200 N·m)	130 - 150 ft. lbs. (180 - 200 N·m)
Gearcase Mounting Screws	18 - 20 ft. lbs. (24 - 27 N·m)	18 - 20 ft. lbs. (24 - 27 N·m)	18 - 20 ft. lbs. (24 - 27 N·m)
Exhaust Housing to Powerhead Screws	18 - 20 ft. lbs. (24 - 27 N·m)	18 - 20 ft. lbs. (24 - 27 N·m)	18 - 20 ft. lbs. (24 - 27 N·m)
Pull at Propeller Shaft to Overcome Reverse Lock			
Standard Length	700 - 800 lbs. (318 - 363 kg)	700 - 800 lbs. (318 - 383 kg)	500 - 700 lbs. (227 - 318 kg)
Long Shaft	575 - 675 lbs. (261 - 306 kg)	575 - 675 lbs. (261 - 306 kg)	700 - 900 lbs. (318 - 408 kg)

Specifications - V4 and V-6

General

	V-4	V-6
Full Throttle Operating Range	4500 - 5500 rpm	150 and 175-4500 - 5500 rpm 200 and 235-4750 - 5750 rpm
Idle rpm in Forward Gear	650 rpm	650 rpm
Test Wheel and rpm	90-Part No. 382861 (10" dia. x 2" wide) 115-Part No. 384933 (11-1/4" dia. x 2-3/16" wide) 140-Part No. 386246 (11-1/4" dia. x 2-1/8" wide) 90 and 115-4800 rpm 140-4900 rpm	150-Part No. 324890 (11-3/16" dia. x 2-3/16" wide 175, 200 and 235-Part No. 387388 (11-1/8" dia. x 2-1/4" wide) 150 and 200-4800 rpm 175-4750 rpm 235-5200 rpm

Powerhead

Bore and Stroke	3.500" Bore and 2.588" Stroke (88,90 x 65,74 mm)	150, 175 and 200- 3.500" Bore x 2.588" Stroke (88,90 x 65.74 mm) 235-3.625" Bore x 2.588" Stroke (92,07 x 65,74 mm)
Piston Displacement	99.6 cu. in. (1632 cm^3)	150, 175 and 200-149.4 cu. in. (2448 cm^3) 235-160.3 cu. in. (2627 cm^3)
Width of Ring		
Upper	0.0895" - 0.0900" (2,273 - 2,286 mm)	0.0895" - 0.0900" (2,273 - 2,286 mm)
Lower	0.0615" - 0.0625" (1,562 - 1,588 mm)	0.0615" - 0.0625" (1,562 - 1,588 mm)
Crankshaft Size		
Top Journal	1.6204" - 1.6199" (41,158 - 41,145 mm)	1.6204" - 1.6199" (41,158 - 41,145 mm)
Center Journal(s)	2.1875" - 2.1870" (55,563 - 55,550 mm)	2.1875" - 2.1870" (55,563 - 55,550 mm)
Bottom Journal	1.3784" - 1.3779" (35,011 - 34,999 mm)	1.3784" - 1.3779" (35,011 - 34,999 mm)
Connecting Rod Crankpin	1.3762" - 1.3757" (34,955 - 34,943 mm)	1.3762" - 1.3757" (34,955 - 34,943 mm)
+Standard Bore Size	3.495" - 3.505" (88,89 - 88,91 mm)	150, 175 and 200-3.495" - 3.505" (88,89 - 88,91 mm) 235-3.620" - 3.630" (92,06 - 92,09 mm)

+To determine correct bore size for oversize pistons, merely add oversize dimension to standard bore size.

Ignition System

Ignition	Flywheel magneto, breakerless C.D.	Flywheel magneto, breakerless C.D.
Spark Plug		
Champion	90 and 115-QL77J4 or L77J4 140-UL77V or QUL77V	UL77V or QUL77V
AC	90 and 115-AC-M40FFX	
Spark Plug Gap	90 and 115-0.040" (1,0 mm)	
Ignition Coil	Part No. 582366	Part No. 582366

Ignition Coil Test Specifications - Part No. 582366

Stevens Model ST-75

Reverse Polarity (Switch Setting CD) 1.1

Stevens Tester Model M.A.-75 or M.A.-80

Switch ..... A (Use Model CD-1 Adapter - Red test clip to orange/black - Black test clip to orange

Index Adjustment 20

Merc-O-Tronic with Capacitor Discharge Adapter Model 55-980

Operating Amperage 1.0

Primary Resistance 0.1

Secondary Continuity ..... 5 approx.

Graham Tester Model 51

Maximum Secondary ..... 400 ohms

Maximum Primary ..... 0.4 ohm

Primary Continuity, Point Test Scale ..... 0.1 ohm max.

Coil Index 50

Coil Test Minimum AMPLIFIED ..... 26 (With secondary circuit "open") Hi tension lead disconnected

Gap Index ..... 50 (Coil must fire spark gap on tester at this setting)

Ignition Component Tests - 90, 115 and 140 Models

	Resistance		Ground Test		Output (Cranking)	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	560 ± 75Ω	High ohms scale	∞	(–), 500	160
Sensor coil	Low ohms scale	40 ± 10Ω	Low ohms scale	∞	S, 5	0,3
Power pack	———	———	———	———	(–), 500	160
Ignition coil primary	Low ohms scale	0,1 ± 0,05Ω				
Secondary	High ohms scale	275 ± 50Ω				

Ignition Component Tests - 150, 175, 200 and 235 Models						
	Resistance		Ground Test		Output	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	550 ± 75 Ω	High ohms scale	∞	(–), 500	160
Sensor coil	Low ohms scale	17 ± 5 Ω	Low ohms scale	∞	S, 5	0,25
Power pack	———	———	———	———	(–), 500	170

Electrical System

	V-4	V-6
Alternator	10 amp-Regulated flywheel alternator (6 amp ML models)	10 amp-Regulated flywheel alternator
Engine Fuse	20 amp-Littlefuse 1A.G. or Buss A.G.A.	20 amp-Littlefuse 1A.G. or Buss A.G.A.
Trim and Tilt Fuse	30 amp-Littlefuse 1A.G.-30 or Buss A.G.A.-30	30 amp-Littlefuse 1A.G.-30 or Buss A.G.A.-30

Fuel System

Carburetion	3 Dual throat carburetors, fixed low and high speed jets, primer starting system	3 Dual throat carburetors, fixed low and high speed jets, primer starting system
Float Level Setting	Between notches on gauge (Part No. 324891)	Between notches on gauge (Part No. 324891)
Float Drop Setting	0.88" - 1.125" (22 - 28 mm)	0.88" - 1.125" (22 - 28 mm)

Clearance Chart

Piston Ring Gap	0.017" - 0.007" (0,43 - 0,18 mm)	0.017" - 0.007" (0,43 - 0,18 mm)
Piston Ring Groove Clearance	0.0040" - 0.0020" (0,102 - 0,51 mm)	0.0040" - 0.0020" (0,102 - 0,51 mm)
Cylinder and Piston	0.0075" - 0.0045" (0,190 - 0,114 mm)	0.0075" - 0.0045" (0,190 - 0,114 mm)
Crankshaft End Play	0.011" - 0.008" (0,28 - 0,20 mm)	0.011" - 0.008" (0,28 - 0,20 mm)
Forward Gear Bushing to Propeller Shaft	0.002" - 0.001" (0,05 - 0,03 mm)	0.002" - 0.001" (0,05 - 0,03 mm)

Torque Chart

Flywheel Nut	100 - 105 ft. lbs. (135 - 140 N·m)	140 - 145 ft. lbs. (190 - 200 N·m)
Connecting Rod Screws	29 - 31 ft. lbs. (40 - 42 N·m)	29 - 31 ft. lbs. (40 - 42 N·m)
Cylinder Head Screws	18 - 20 ft. lbs. (24 - 27 N·m)	150, 175 and 200-18 - 20 ft. lbs. (24 - 27 N·m) 235-20 - 22 ft. lbs. (27 - 30 N·m)
Crankcase to Cylinder Main Bearing Screws and Nuts		
Upper, Center, Bottom	18 - 20 ft. lbs. (24 - 27 N·m)	18 - 20 ft. lbs. (24 - 27 N·m)
Power Pack Mounting Screws	48 - 60 in. lbs. (5 - 7 N·m)	48 - 60 in. lbs. (5 - 7 N·m)
Ignition Coil Mounting Screws	60 - 80 in. lbs. (7 - 9 N·m)	60 - 80 in. lbs. (7 - 9 N·m)
Spark Plugs	17.5 - 20.5 ft. lbs. (24 - 27 N·m)	17.5 - 20.5 ft. lbs. (24 - 27 N·m)
Lower Journal Bearing Retainer Plate Screws	96 - 120 in. lbs. (11 - 14 N·m)	96 - 120 in. lbs. (11 - 14 N·m)
Stator Screws	10 - 12 ft. lbs. (14 - 16 N·m)	10 - 12 ft. lbs. (14 - 16 N·m)
Crankcase Head Screws		
Upper	10 - 12 ft. lbs. (14 - 16 N·m)	6 - 8 ft. lbs. (8 - 11 N·m)
Lower	8 - 10 ft. lbs. (11 - 14 N·m)	6 - 8 ft. lbs. (8 - 11 N·m)
Starter Motor Thru-Bolts		
Prestolite	110 - 122 in. lbs. (12 - 14 N·m)	110 - 122 in. lbs. (12 - 14 N·m)
Bosch	90 - 105 in. lbs. (10 - 12 N·m)	90 - 105 in. lbs. (10 - 12 N·m)
Starter Motor Pinion Nut		
Prestolite	25 - 30 ft. lbs. (34 - 40 N·m)	25 - 30 ft. lbs. (34 - 40 N·m)
Bosch	20 - 25 ft. lbs. (27 - 34 N·m)	20 - 25 ft. lbs. (27 - 34 N·m)
Driveshaft Pinion Nut	60 - 65 ft. lbs. (80 - 90 N·m)	60 - 65 ft. lbs. (80 - 90 N·m)
Pivot Shaft Nut	130 - 150 ft. lbs. (180 - 200 N·m)	130 - 150 ft. lbs. (180 - 200 N·m)
Exhaust Housing to Powerhead Screws	12 - 14 ft. lbs. (16 - 19 N·m)	12 - 14 ft. lbs. (16 - 19 N·m)
Gearcase Mounting Screws	22 - 24 ft. lbs. (30 - 33 N·m)	22 - 24 ft. lbs. (30 - 33 N·m)
Pull at Propeller Shaft to Overcome Reverse Lock	750 - 900 lbs. (340 - 408 kg)	750 - 900 lbs. (340 - 408 kg)

OVERSIZE PISTONS DIA. = 3.650" ALL 6.
CYL. BORE = 3.6555" DIA.
CLEARANCE = .0055"