

Specifications - 2 and 4

General

2

4

Full Throttle Operating Range	4000 - 5000 rpm	4500 - 5500 rpm
Idle rpm in Forward Gear with Proper Propeller	650 rpm	600 rpm
Test Wheel and rpm	Part No. 316021 (4-9/16" dia. x 5/8" wide) 3900 rpm	Part No. 317738 (5-1/4" dia. x 11/16" wide) 4550 rpm

Powerhead

Bore and Stroke	39,8 mm x 34,9 mm (1.567" Bore x 1.374" Stroke)	39,7 mm x 34,9 mm (1.565" Bore x 1.374" Stroke)
Piston Displacement	43 cm ³ (2.64 cu. in.)	87 cm ³ (5.28 cu. in.)
Crankshaft Size		
Top Journal	19,055 - 19,042 mm (0.7502" - 0.7497")	19,075 - 19,063 mm (0.7510" - 0.7506")
Center Journal		16,993 - 16,980 mm (0.6690" - 0.6685")
Bottom Journal	19,055 - 19,042 mm (0.7502" - 0.7497")	19,055 - 19,045 mm (0.7502" - 0.7498")
Connecting Rod Crank Pin	17,018 - 17,005 mm (0.6700" - 0.6695")	17,018 - 17,005 mm (0.6700" - 0.6695")
+Standard Bore Size	39,815 - 39,797 mm (1.5675" - 1.5668")	39,751 - 39,733 mm (1.5650" - 1.5643")

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

Ignition System

Ignition	Flywheel magneto	Flywheel magneto
Spark Plug		
Champion	RJ6C or J6C - 14 mm	RL86C or L86C - 14 mm
Spark Plug Gap	0,76 mm (0.030")	0,76 mm (0.030")
Breaker Point Gap	0,51 mm (0.020")	0,51 mm (0.020")
Condenser	Part No. 580321 - 0.18 - 0.22 Mfd.	Part No. 580321 - 0.18 - 0.22 Mfd.
Ignition Coil	Part No. 582995	Part No. 582995

Ignition Coil Test Specifications

Part No. 582995

Stevens Tester Model ST-75

Normal Polarity (Switch Setting Standard)	1.8
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Stevens Tester Model No. M.A. - 75 or 80

Switch	Index Adjustment
B	26

Merc-O-Tronic

Operating Amperage	Primary Resistance		Secondary Continuity		Secondary Resistance	
	Min.	Max.	Min.	Max.	Min.	Max.
1.3	0.7	1.1	50	60	6500	9000

Graham Tester Model 51

Maximum Secondary	Maximum Primary	Coil Index	Minimum Coil Test	Max. Gap Index
10,000	1.4	60	25	60

Coil Ohmmeter Test

Primary (Low Ohms)	0.9 Ω ± 0.2
Secondary (High Ohms)	8000 Ω ± 300

Specifications - 4 Deluxe thru 8

General

4 Deluxe and 4.5

5, 6 and 8

Full Throttle Operating Range	4500 - 5500 rpm	5 and 6 - 4500 - 5500 rpm 8 - 5000 - 6000 rpm
Idle rpm in Forward Gear with Proper Propeller	600 rpm	650 rpm
Test Wheel and rpm	Part No. 390123 (5-3/4" dia. x 5/8" wide) 5100 rpm	Part No. 390239 (5-3/4" dia. x 1-1/8" wide) 4900 rpm

Powerhead

Bore and Stroke	39,69 mm x 34,93 mm (1.5625" Bore x 1.375" Stroke)	49,21 mm x 43,18 mm (1.9375" Bore x 1.700" Stroke)
Piston Displacement	87 cm ³ (5.28 cu. in.)	164 cm ³ (10.0 cu. in.)
Crankshaft Size		
Top Journal	19,075 - 19,063 mm (0.7510" - 0.7505")	22,282 - 22,155 mm (0.87725" - 0.87225")
Center Journal	16,993 - 16,980 mm (0.6690" - 0.6685")	20,712 - 20,585 mm (0.81545" - 0.8104")
Bottom Journal	19,055 - 19,045 mm (0.7502" - 0.7498")	19,207 - 19,045 mm (0.7562" - 0.7498")
Connecting Rod Crank Pin	17,018 - 17,005 mm (0.6700" - 0.6695")	17,018 - 17,005 mm (0.6700" - 0.6695")
+Standard Bore Size	39,751 - 39,733 mm (1.5650" - 1.5643")	49,225 - 49,207 mm (1.9380" - 1.9373")

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

Ignition System

Ignition	Flywheel magneto, breakerless C.D.	Flywheel magneto, breakerless C.D.
Spark Plug (Champion)		
Sustained Low Speed Operation	QL77J4	QL77J4
Alternate	L77J4	L77J4
Gap Setting	1,0 mm (0.040")	1,0 mm (0.040")
Sustained High Speed Operation	QL78V	QL78V
Alternate	L78V	L78V
Gap Setting	Gap Is Permanent	Gap Is Permanent
Ignition Coil	Part No. 582508	Part No. 582508
RPM Limiter Powerpack		8 - 6200 rpm

Electrical System

Alternator System		
Electric Start		4 amp flywheel alternator
Manual Start (AC Model)	60 watt AC at 12 V	60 watt AC at 12 V

Ignition Coil Test Specifications - Part No. 582508

Stevens Model ST-75	Merc-O-Tronic 9800 or 98 with Adapter Model 55-980
Maximum Operating Amperage (Reverse Polarity - Switch Setting: CD) 1.1 Amps	Maximum Operating Amperage (Reverse Polarity) 1.5 Amps
Stevens Tester Model M.A.-75 or M.A.-80	Primary Resistance 0.1
Switch A (Use Model CD-1 Adapter - Reverse Polarity)	Secondary Continuity 5 approx.
Index Adjustment 20	

Ignition Component Tests - 4 Deluxe thru 8

	Resistance		Ground Test		Cranking Output	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	575 ± 25 Ω	High ohms scale	∞	(-), 500	230
Sensor coil	Low ohms scale	40 ± 10 Ω	Low ohms scale	∞	S, 5	2.0
Power pack					(+), 500	200
Ignition coil primary	Low ohms scale	0,1 ± 0,05 Ω				
Secondary	High ohms scale	275 ± 50 Ω				

Specifications - 9.9 and 15

General

9.9 and 15

Full Throttle Operating Range	9.9-5000 - 6000 rpm 15-5500 - 7000 rpm
Idle rpm in Forward Gear with Proper Propeller	650 rpm
Test Wheel and rpm	Part No. 386537 (7" dia. x 1" wide) 9.9-5500 rpm 15-6200 rpm

Powerhead

Bore and Stroke	55,58 mm x 44,70 mm (2.188" Bore x 1.760" Stroke)
Piston Displacement	216 cm ³ (13.20 cu. in.)
Crankshaft Size	
Top Journal	22,255 - 22,243 mm (0.8762" - 0.8757")
Center Journal	20,638 - 20,625 mm (0.8125" - 0.8120")
Bottom Journal	19,200 - 19,990 mm (0.7874" - 0.7870")
Connecting Rod Crankpin	20,638 - 20,625 mm (0.8125" - 0.8120")
+Standard Bore Size	55,582 - 55,562 mm (2.1883" - 2.1875")

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

Ignition System

Ignition	Flywheel magneto, breakerless C.D.
Spark Plug (Champion)	
Sustained Low Speed Operation	QL77J4
Alternate	L77J4
Gap Setting	1,0 mm (0.040")
Sustained High Speed Operation	QL78V
Alternate	L78V
Gap Setting	Gap Is Permanent
Ignition Coil	Part No. 582508

Ignition Coil Test Specifications - Part No. 582508

Stevens Model ST-75	Merc-O-Tronic 9800 or 98 with Adapter Model 55-980
Maximum Operating Amperage (Reverse Polarity - Switch Setting: CD)	1.1 Amps
Stevens Tester Model M.A.-75 or M.A.-80	Maximum Operating Amperage (Reverse Polarity)
Switch	A (Use Model CD-1 Adapter - Reverse Polarity)
Index Adjustment	20
	1.5 Amps Primary Resistance
	0.1 Secondary Continuity
	5 approx.

Ignition Component Tests - 9.9 and 15

	Resistance		Ground Test		Cranking Output	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	575 ± 25 Ω	High ohms scale	∞	(-), 500	230
Sensor coil	Low ohms scale	40 ± 10 Ω	Low ohms scale	∞	S, 5	2.0
Power pack					(-), 500	200
Ignition coil primary	Low ohms scale	0,1 ± 0,05 Ω				
Secondary	High ohms scale	275 ± 50 Ω				

Specifications - 20 thru 30

General

20 thru 30

Full Throttle Operating Range	4500 - 5500 rpm
Idle rpm in Forward Gear with Proper Propeller	650 rpm
Test Wheel and rpm	20 - Part No. 386891
	25 and 30 - Part No. 394145
	20 - 4550 min. rpm
	25 - 4800 min. rpm
	30 - 5400 min. rpm

Powerhead

Bore and Stroke	76,20 mm x 57,15 mm (3.000" Bore x 2.250" Stroke)
Piston Displacement	521 cm ³ (31.8 cu. in.)
Crankshaft Size	
Top Journal	31,775 - 31,788 mm (1.2510" - 1.2515")
Center Journal	30,056 - 30,069 mm (1.1833" - 1.1838")
Bottom Journal	24,999 - 25,009 mm (0.9842" - 0.9846")
Connecting Rod Crankpin	30,043 - 30,030 mm (1.1828" - 1.1823")
+Standard Bore Size	76,213 - 76,187 mm (3.0005" - 2.9995")

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

Ignition System

Ignition	Flywheel magneto, breakerless C.D.
Spark Plug (Champion)	
Sustained Low Speed Operation	QL77J4
Alternate	L77J4
Gap Setting	1,0 mm (0.040")
Sustained High Speed Operation	QL78V
Alternate	L78V
Gap Setting	Gap Is Permanent
Ignition Coil	Part No. 582508

Ignition Coil Test Specifications - Part No. 582508

Stevens Model ST-75	Merc-O-Tronic 9800 or 98 with Adapter Model 55-980
Maximum Operating Amperage (Reverse Polarity - Switch Setting: CD)	Maximum Operating Amperage (Reverse Polarity)
1.1 Amps	1.5 Amps
Stevens Tester Model M.A.-75 or M.A.-80	Primary Resistance
Switch	0.1
A (Use Model CD-1 Adapter - Reverse Polarity)	Secondary Continuity
Index Adjustment	5 approx.
20	

Specifications - 40 thru 75

General

40, 50 and 60

70 and 75

Full Throttle Operating Range	40 and 50 - 4500 - 5500 60 - 5000 - 6000	70 - 4500 - 5500 75 - 5200 - 5800
Idle rpm in Forward Gear with Proper Propeller	750 rpm	750 rpm
Test Wheel and rpm	Part No. 387635 40 Rope-Part No. 382861 40 Rope-5200 rpm 40 and 50 Electric Start - 4900 rpm 60 - 5600 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	80,96 mm x 71,63 mm (3.1875" Bore x 2.820" Stroke)	76,20 mm x 59,53 mm (3.000" Bore x 2.3437" Stroke)
Piston Displacement	737 cm ³ (45 cu. in.)	814 cm ³ (49.7 cu. in.)
Crankshaft Size		
Top Journal	38,047 - 38,034 mm (1.4979" - 1.4974")	38,047 - 38,034 mm (1.4979" - 1.4974")
Center Journal	34,930 - 34,920 mm (1.3752" - 1.3748")	34,930 - 34,920 mm (1.3752" - 1.3748")
Bottom Journal	30,110 - 29,997 mm (1.1815" - 1.1810")	30,110 - 29,997 mm (1.1815" - 1.1810")
Connecting Rod Crankpin	30,043 - 30,030 mm (1.1828" - 1.1823")	30,043 - 30,030 mm (1.1828" - 1.1823")
+Standard Bore Size	80,975 - 80,950 mm (3.1880" - 3.1870")	76,213 - 76,187 mm (2.9995 - 3.0005")

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

Ignition System

Ignition	Flywheel magneto, breakerless C.D.	Flywheel magneto, breakerless C.D.
Spark Plug (Champion)		
Sustained Low Speed Operation	QL77J4	QL77J4
Alternate	L77J4	L77J4
Gap Setting	1,0 mm (0.040")	1,0 mm (0.040")
Sustained High Speed Operation	QL78V	QL78V
Alternate	L78V	L78V
Gap Setting	Gap Is Permanent	Gap Is Permanent
Ignition Coil	Part No. 582508	Part No. 582508

Ignition Coil Test Specifications - Part No. 582508

Stevens Model ST-75	Merc-O-Tronic 9800 or 98 with Adapter Model 55-980
Maximum Operating Amperage (Reverse Polarity - Switch Setting: CD) 1.1 Amps	Maximum Operating Amperage (Reverse Polarity) 1.5 Amps
Stevens Tester Model M.A.-75 or M.A.-80	Primary Resistance 0.1
Switch A (Use Model CD-1 Adapter - Reverse Polarity)	Secondary Continuity 5 approx.
Index Adjustment 20	

Ignition Component Tests - 40, 50 and 60 Models

	Resistance		Ground Test		Cranking Output	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	575 ± 25 Ω	High ohms scale	∞	(-), 500	230
Sensor coil	Low ohms scale	40 ± 10 Ω	High ohms scale	∞	S, 5	2.0
Power pack					(-), 500	200
Ignition coil primary	Low ohms scale	0,1 ± 0,05 Ω				
Secondary	High ohms scale	275 ± 50 Ω				

Specifications - 90, 115 and V-6

General

90 and 115

V-6

Full Throttle Operating Range	4500 - 5500 rpm	150 - 4500 - 5500 rpm 185 thru 235 - 4750 - 5750 rpm 2.6 Models - 5000 - 6000 rpm
Idle rpm in Forward Gear with Proper Propeller	650 rpm	650 rpm
Test Wheel and rpm	90 - Part No. 382861 (10" dia. x 2" wide) 90 - 4800 rpm 115 - Part No. 386246 (11-1/4" dia. x 2-1/8" wide) 115 - 4900 rpm	Part No. 387388 (11-1/8" dia. x 2-1/4" wide) 150 - 4500 - 5500 rpm 175 thru 2.6 - 4800 - 5800 rpm

Powerhead

Bore and Stroke	88,90 mm x 65,74 mm (3.500" Bore x 2.588" Stroke)	150 thru 185 - 88,90 mm x 65,74 mm (3.500" Bore x 2.588" Stroke) 235 and 2.6 Models - 92,07 mm x 65,74 mm (3.6250" Bore x 2.588" Stroke)
Piston Displacement	1632 cm ³ (99.6 cu. in.)	150 thru 185 - 2448 cm ³ (149.4 cu. in.) 235 and 2.6 Models - 2627 cm ³ (160.3 cu. in.)
Crankshaft Size		
Top Journal	41,158 - 41,145 mm (1.6204" - 1.6199")	41,158 - 41,145 mm (1.6204" - 1.6199")
Center Journal(s)	55,563 - 55,550 mm (2.1875" - 2.1870")	55,563 - 55,550 mm (2.1875" - 2.1870")
Bottom Journal	35,011 - 34,999 mm (1.3784" - 1.3779")	35,011 - 34,999 mm (1.3784" - 1.3779")
Connecting Rod Crankpin	34,955 - 34,943 mm (1.3762" - 1.3757")	34,955 - 34,943 mm (1.3762" - 1.3757")
+Standard Bore Size	88,887 - 88,913 mm (3.4995" - 3.5005")	150 thru 185 - 88,887 - 88,913 mm (3.4995" - 3.5005") 235 and 2.6 Models 92,062 - 92,087 mm (3.6255" - 3.6245")

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

Ignition System

Ignition	Flywheel magneto, breakerless C.D.	Flywheel magneto, breakerless C.D.
Spark Plug		
Champion	90 - QL77J4 or L77J4 115 - UL77V or QUL77V	UL77V or QUL 77V
Spark Plug Gap	90 - 1,0 mm (0.040")	
Ignition Coil	Part No. 582508	Part No. 582508
RPM Limiter Powerpack		150, 185 and 235 - 5800 rpm 2.6 - 6200 rpm

Ignition Coil Test Specifications - Part No. 582508

Stevens Model ST-75	Merc-O-Tronic 9800 or 98 with Adapter Model 55-980
Maximum Operating Amperage (Reverse Polarity - Switch Setting: CD) 1.1 Amps	Maximum Operating Amperage (Reverse Polarity) 1.5 Amps
Stevens Tester Model M.A.-75 or M.A.-80	Primary Resistance 0.1
Switch A (Use Model CD-1 Adapter - Reverse Polarity)	Secondary Continuity 5 approx.
Index Adjustment 20	

Ignition Component Tests - 90 and 115

	Resistance		Ground Test		Cranking Output	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge coil	High ohms scale	560 ± 25 Ω	High ohms scale	∞	(-), 500	150
Sensor coil	Low ohms scale	40 ± 10 Ω	Low ohms scale	∞	S, 5	0,3
Power pack	—	—	—	—	(-), 500	150
Ignition coil primary	Low ohms scale	0,1 ± 0,05 Ω				
Secondary	High ohms scale	275 ± 50 Ω				

Specifications - 120 and 140

General

120 and 140

Full Throttle Operating Range	5000 - 6000 rpm
Idle rpm in Forward Gear with Proper Propeller	650 rpm
Test Wheel and rpm	Part No. 387388
	120 - 5000 - 5500 rpm
	140 - 5300 - 5800 rpm

Powerhead

Bore and Stroke	88,90 mm x 72,6 mm (3.500" Bore x 2.860" Stroke)
Piston Displacement	1800 cm ³ (110 cu. in.)
Crankshaft Size	
Top Journal	41,158 - 41,145 mm (1.6204" - 1.6199")
Center Journal	55,563 - 55,550 mm (2.1875" - 2.1870")
Bottom Journal	39,997 - 40,010 mm (1.5747" - 1.5752")
Connecting Rod Crankpin	38,087 - 38,100 mm (1.4995" - 1.5000")
+Standard Bore Size	88,887 - 88,913 mm (3.4995" - 3.5005")

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

Ignition System

Ignition	Flywheel magneto, breakerless C.D.
Spark Plug (Champion)	
Sustained Low Speed Operation	QL77J4
Alternate	L77J4
Gap Setting	1,0 mm (0.040")
Sustained High Speed Operation	QL78V
Alternate	L78V
Gap Setting	Gap Is Permanent
Ignition Coil	Part No. 582508
RPM Limiter Powerpack	6100 rpm

Ignition Coil Test Specifications - Part No. 582508

Stevens Model ST-75	Merc-O-Tronic 9800 or 98 with Adapter Model 55-980
Maximum Operating Amperage (Reverse Polarity - Switch Setting: CD)	1.1 Amps
Stevens Tester Model M.A.-75 or M.A.-80	Maximum Operating Amperage (Reverse Polarity)
Switch	A (Use Model CD-1 Adapter - Reverse Polarity)
Index Adjustment	20
	Maximum Operating Amperage (Reverse Polarity)
	1.5 Amps
	Primary Resistance
	0.1
	Secondary Continuity
	5 approx.

Ignition Component Tests - 120 and 140

	Resistance		Ground Test		Output (Cranking)	
	Meter Setting	Reading	Meter Setting	Reading	Meter Setting	Reading
Charge Coil	High ohms scale	560 ± 25 Ω	High ohms scale	∞	(-), 500	175
Sensor coil	Low ohms scale	40 ± 10 Ω	Low ohms scale	∞	S, 5	0,3
Power pack	—————	—————	—————	—————	(-), 500	175
Ignition coil primary	Low ohms scale	0,1 ± 0,05 Ω				
Secondary	High ohms scale	275 ± 50 Ω				