



IMPORTANT INFORMATION

Section 1A - Specifications



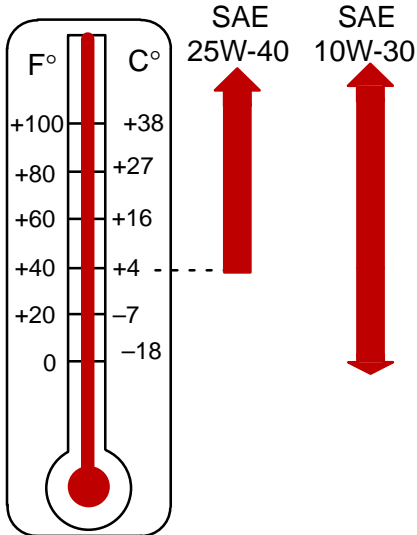
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Specifications

Models 25 Bigfoot (4-Stroke)		
PERFORMANCE	Power Model 25 Full Throttle RPM Range	25 h.p. (18.6 Kw) @5750 RPM 5500 - 6000
OUTBOARD WEIGHT	Electric 25 EL	178 lbs. (80.7 kg)
FUEL	RECOMMENDED GASOLINE	Automotive Unleaded with a Minimum Pump Posted Octane Rating of 87
OIL	OIL FILTER OIL FILTER WRENCH ENGINE OIL CAPACITY ENGINE OIL	p/n 35-822626A2 p/n 91-802653 Either 3 Quarts or 3 Liters SAE 10W-30 viscosity oil is recommended for use in all temperatures. SAE 25W-40 viscosity oil may be used at temperatures above 40° F (4° C). Use 4-Cycle Marine Oil with the proper viscosity for the expected temperature in your area (see range thermometer on left). If not available, use a premium quality 4-cycle engine oil, certified to meet or exceed anyone of the following American Petroleum Institute (API) service classifications SH, SG, SF, CF-4, CE, CD, CDII.





<p>IGNITION SYSTEM Readings taken @ 68°F (20°C).</p>	<p>Type Spark Plug Type Gap Hex Size Hole Size Torque Firing Order Ignition Timing: Below 800 RPM ECM (p/n 855311--) ECM (p/n 856058--/856190--) ECM (p/n 856190--/856482--) ECM (p/n 856177--/856178--) ECM (p/n 878433--) Fully Advanced (6000 RPM) Charge Coil Resistance Crank Position Sensor Resistance Ignition Coil Resistance: Primary Secondary (W/o Boots) ECM Engine Speed Limiter Soft Reduction (Retards Timing) Spark Cut-Out Reduction (Percentages of ignition spark are Cut-Out) ECM Overheat/Low Oil Pressure Speed Control Oil Pressure Switch</p>	<p>Capacitor Discharge Ignition NGK DPR6EA-9 0.035 in. (1.0 mm) 18 mm 12 mm 150 lb-in. (17 Nm) 1-2 10° B.T.D.C 5° B.T.D.C 5° B.T.D.C 5° B.T.D.C 5° B.T.D.C 30° B.T.D.C 660 - 710 Ω (GRN/WHT - WHT/GRN) 300 - 350 Ω (RED - WHT) 0.08 - 0.7 Ω 3.5 - 4.7 kΩ 6200 RPM 6250 RPM Approximately 2000 RPM Below 2.5 psi (17 kPa) Continuity</p>
<p>CHARGING SYSTEM Readings taken @ 68°F (20°C).</p>	<p>Alternator Type 6 AMP Manual Alternator: Output Battery Charging Resistance 15 AMP Electric Alternator: Output Battery Charging Coil Resistance Power Bobbin Resistance (For Electrothermal Valve) Quicksilver Tachometer Setting</p>	<p>Single Phase (12 Pole) 12 Volts-6 Amps. 0.9 - 1.1 Ohms (YEL-YEL) 12V-15 Amps. (Rectified/Regulated) 0.22 - 0.24 Ohms (YEL-YEL) 6.7-7.1 Ohms (YEL/BLK-YEL/BLK) "6P" or "4"</p>
<p>STARTING SYSTEM</p>	<p>Manual Start Electric Start: Starter Type Output Ampere Draw Under: (Load) (No Load)</p>	<p>Recoil Starter Bendix 1.1 kW 106.0 Amps 21.1 Amps</p>
<p>BATTERY</p>	<p>Battery Rating Minimum Requirement For operation below 32° F (0° C)</p>	<p>465 Marine Cranking Amps (MCA) or 350 Cold Cranking Amps (CCA) 1000 Marine Cranking Amps (MCA) or 775 Cold Cranking Amps (CCA)</p>
<p>ENRICHMENT CONTROL SYSTEM Readings taken @ 68°F (20°C).</p>	<p>Auto Enrichener Electrothermal ram projection</p>	<p>15 - 25 Ω 0.3 in. (7 mm) after 5 min. of power</p>

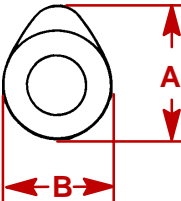
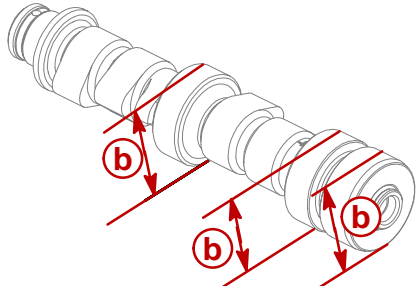
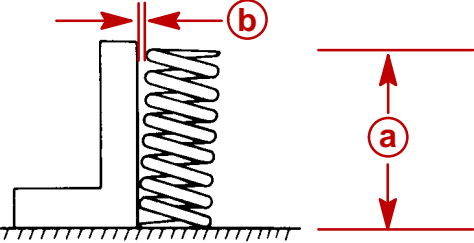


FUEL SYSTEM	Fuel Pump Type Fuel Pump: Pressure Plunger Stroke Fuel Tank Capacity	External (Plunger/Diaphragm) 3-6 PSI 0.23 - 0.38 in. (5.85 - 9.65 mm) Accessory
CARBURETOR	Idle RPM (Out Of Gear) Idle RPM (In Forward Gear) Wide Open Throttle RPM (WOT) Range Standard Model Main Jet Size Pilot Jet Idle Jet Bodensee Model Main Jet Pilot Jet Idle Jet Float Height (a)	825 ± 25 RPM 775 ± 25 RPM 5500-6000 #110 #50 #45 #105 #50 #50 0.47-0.63 in. (12.0-16.0 mm)
CYLINDER BLOCK	Type Displacement Number of Cylinders	4 Stroke Cycle – Over Head Camshaft 30.4 cu. in. (498cc) 2
STROKE	Length	2.953 in. (75 mm)
CYLINDER BORE	Diameter Standard Oversize-0.010 in. (0.25 mm) Oversize-0.020 in. (0.50 mm) Taper/Out of Round Maximum Bore Type	2.5591 in. (65 mm) 2.5689 in. (65.25 mm) 2.5787 in. (65.5 mm) 0.003 in. (0.08 mm) Cast Iron
PISTON	Piston Type O.D. at Skirt Standard Oversize-0.010 in. (0.25mm) Oversize-0.020 in. (0.50mm)	Aluminum 2.5570 - 2.5578 in. (64.950 - 64.965 mm) 2.5669 - 2.5675 in. (65.2 - 65.215 mm) 2.5768 - 2.5774 in. (65.450 - 65.465 mm)
PISTON CLEARANCE	Piston to Cylinder Clearance	0.0014 - .0026 in. (0.035 - 0.065 mm)
RINGS	Ring End Gap (Installed) Top Middle Bottom (Oil Ring) Side Clearance: Top Middle	0.006 - 0.012 in. (0.15 - 0.30 mm) 0.012 - 0.020 in. (0.30 - 0.50 mm) 0.008 - 0.028 in. (0.20 - 0.70 mm) 0.0008 - 0.0024 in. (0.02 - 0.06 mm) 0.0008 - 0.0024 in. (0.02 - 0.06 mm)
BALANCE PISTON	Wear Limit	3.735 in. (94.883 mm)
CRANKCASE COVER	Bore Wear Limit	3.802 in. (95.045 mm)
COMPRESSION RATIO	Compression Ratio Cylinder Compression* (Electric Models Only, Cold Engine @ W.O.T.)	9.8:1 180 -210 psi (Peak) (1241 - 1448 kPa)
PISTON PIN	Piston Pin Diameter	0.6285 - 0.6287 in. (15.965 - 15.970 mm)

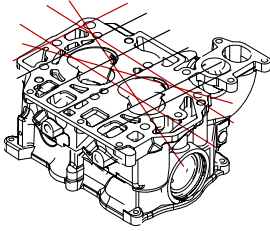
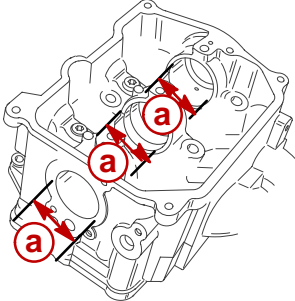
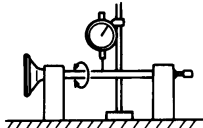


CONNECTING ROD	Oil Clearance (Big End) Small End Inside Diameter	0.0008 - 0.0020 in. (0.020 - 0.052 mm) 0.6293 - 0.6298 in. (15.985 - 15.998 mm)
CRANKSHAFT	Main Bearing Clearance Crankshaft Run-out	0.0005 - 0.0017 in. (0.012 - 0.044 mm) 0.0012 in. (0.03 mm)

***NOTE:** Manual start models are equipped with compression relief mechanism which will not allow compression testing.

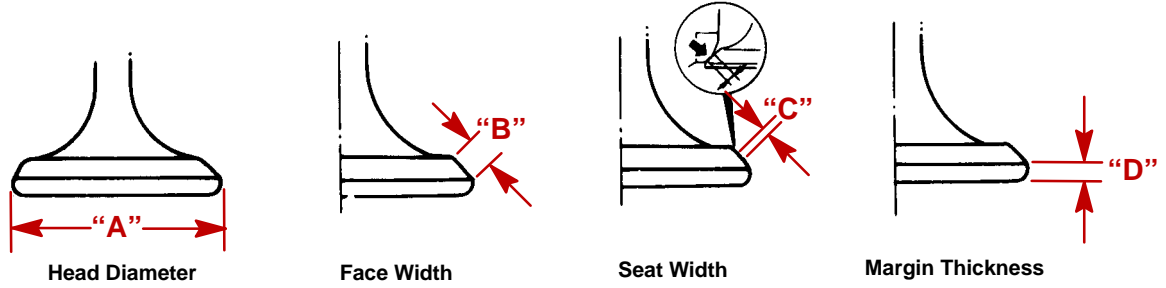
CAMSHAFT	<p>Camshaft Dimensions Intake "A" Exhaust "A" Intake "B" Exhaust "B"</p>  <p>Run-out Limit Camshaft Bearing Diameter "b"</p> 	<p>1.216 - 1.220 in. (30.89 - 30.99 mm) 1.216 - 1.220 in. (30.89 - 30.99 mm) 1.022 - 1.025 in. (25.95 - 26.05 mm) 1.022 - 1.025 in. (25.95 - 26.05 mm)</p> <p>0.0039 in. (0.1 mm) 1.4541 - 1.4549 in. (36.935 - 36.955 mm)</p>
VALVE SPRING	<p>Free Length "a" Tilt Limit "b"</p>  <p>Compressed Pressure (Installed) Intake Exhaust Tilt Limit (Intake & Exhaust) Dir. of Winding (Intake & Exhaust)</p>	<p>1.491-1.569 in. (37.85-39.85 mm) Less than 0.060 in. (1.7 mm)</p> <p>19.8 - 22.0 lbs. (9.0 - 10.0 kg) 19.8 - 22.0 lbs. (9.0 - 10.0 kg) 0.043 in. (1.1 mm) Left Hand</p>



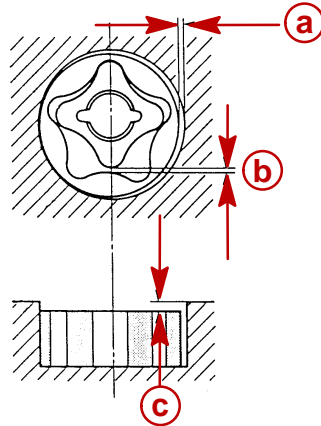
<p>CYLINDER HEAD</p>	<p>Warp Limit</p>  <p>* Lines indicate straight edge measurement</p> <p>Camshaft Bore Inside Diameter "a"</p> 	<p>0.004 in. (0.1 mm)</p> <p>1.4567 - 1.4577 in. (37.000 - 37.025 mm)</p>
	<p>VALVES</p>	<p>Valve/Valve Seat/Valve Guides:</p> <p>Valve Clearance (cold)</p> <p>Intake 0.006 - 0.010 in. (0.15 - 0.25 mm)</p> <p>Exhaust 0.010 - 0.014 in. (0.25 - 0.35 mm)</p> <p>Valve Dimensions:</p> <p>"A" Head Diameter</p> <p>Intake 1.256 - 1.264 in. (31.9 - 32.1 mm)</p> <p>Exhaust 1.020 - 1.028 in. (25.9 - 26.1 mm)</p> <p>"B" Face Width</p> <p>Intake 0.079 - 0.124 in. (2.00 - 3.14 mm)</p> <p>Exhaust 0.079 - 0.124 in. (2.00 - 3.14 mm)</p> <p>"C" Seat Width</p> <p>Intake 0.035 - 0.043 in. (0.9 - 1.1 mm)</p> <p>Exhaust 0.035 - 0.043 in. (0.9 - 1.1 mm)</p> <p>"D" Margin Thickness</p> <p>Intake 0.020 - 0.035 in. (0.5 - 0.9 mm)</p> <p>Exhaust 0.020 - 0.035 in. (0.5 - 0.9 mm)</p> <p>Stem Outside Diameter</p> <p>Intake 0.2156 - 0.2161 in. (5.475 - 5.490 mm)</p> <p>Exhaust 0.2150 - 0.2156 in. (5.460 - 5.475 mm)</p> <p>Guide Inside Diameter</p> <p>Intake 0.2165 - 0.2170 in. (5.500 - 5.512 mm)</p> <p>Exhaust 0.2165 - 0.2170 in. (5.500 - 5.512 mm)</p> <p>Stem To Guide Clearance</p> <p>Intake 0.0004 - 0.0015 in. (0.010 - 0.037 mm)</p> <p>Exhaust 0.0010 - 0.0020 in. (0.025 - 0.052 mm)</p> <p>Stem Run-out Limit (max.)</p> <p>0.0006 in. (0.016 mm)</p> 



Valve Dimensions



ROCKER SHAFT	Outside Diameter	0.6288 - 0.6296 in. (15.971 - 15.991 mm)
ROCKER ARM	Inside Diameter of Bore	0.6299 - 0.6306 (16.000 - 16.018 mm)
THERMOSTAT	Valve Opening Temperature Full Open Temperature Valve Lift (Minimum)	136° F - 143° F (58° C - 62° C) 158° F (70° C) 0.12 in. (3 mm)
LUBRICATION SYSTEM	Pump Type Engine Oil Pressure Engine Oil Pan Capacity Oil Pump: Outer Rotor to Housing "a" Inner Rotor to Outer Rotor "b" Rotor to Housing "c"	Trochoid 30-40 PSI at 3000 RPM (Warm Engine) Either 3 Qts. or 3 Liters 0.0035 - 0.006 in. (0.09 - 0.15 mm) 0.005 in. (0.12 mm) 0.001 - 0.003 in. (0.03 - 0.08 mm)





MID-SECTION	Transom Height: Short Shaft Long Shaft Steering Pivot Range Tilt Pin Positions Full Tilt Up Angle Allowable Transom Thickness	15 in. (38 cm) 20 in. (51 cm) 90° 5 + Shallow Water 70° 2-3/8 in. (60.3 mm)
GEAR HOUSING (2.42:1)	Gear Ratio Gearcase Capacity Lubricant Type Forward Gear Number of Teeth Pinion Gear Number of Teeth Pinion Height Forward Gear Backlash Water Pressure @ Idle @ WOT	2.42:1 14.9 fl. oz. (440 mL) Premium Blend Gear Lube 29 Spiral/Bevel 12 Spiral/Bevel 0.025 in. (0.64 mm) No Adjustment 2 - 4 PSI @ 800 rpm 12-17 PSI @ 6000 rpm

Propeller Information Chart

Wide Open Throttle RPM: 5500-6000
Recommended Transom Heights : 15", 20", 22.5"
Right Hand Rotation Standard
Gear Reduction : 2.42 : 1
*Standard with outboard

Diameter	Pitch	No. of Blades	Material	Approx. Gross Boat Wgt. (lbs)	Approx. Boat Length	Speed Range (mph)	Propeller Part Number
10-1/8"	15"	3	Steel	Up to 800	Up to 14'	28-34	48-76232A5
10-1/8"	15"	3	Alum	Up to 800	Up to 14'	28-34	48-73140A40
10-1/4"	14"	3	Steel	600-900	Up to 14'	26-31	48-76230A5
10-1/4"	14"	3	Alum	600-900	Up to 14'	26-31	48-73138A40
10-3/8"	13"	3	Steel	700-1000	13-15'	24-29	48-76228A5
10-3/8"	13"	3	Alum	700-1000	13-15'	24-29	48-73136A40
10-5/8"	12"	3	Steel	800-1100	14-16'	21-26	48-79792A5
10-5/8"	12"	3	Alum	800-1100	14-16'	21-26	48-73134A40
11-5/8"	11"	3	Steel	1000-1300	15-17'	19-23	48-823478A5
10-7/8"	11"	3	Alum	1000-1300	15-17'	19-23	48-85632A45*
11-5/8"	10-1/2"	3	Alum	1200-1500	16-18'	17-21	48-827312A10
11-1/4"	10"	3	Alum	1300-1700	17-20'	15-20	48-73132A40
12-1/4"	9"	3	Steel	1500+	18'+	10-16	48-97868A10
12-1/4"	9"	3	Alum	1500+	18'+	10-16	48-87818A10
12-1/2"	8"	3	Alum	2000+	20'+	1-4	48-42738A10



Mercury/Quicksilver Lubricants and Sealants

Description	Mercury Part Number	Quicksilver Part Number
Needle Bearing Assy. Lubricant [8 oz. (226.8 grams)] tube	92-802868A1	N/A
Dielectric Grease [8 oz. (226.8 grams)] can	92-823506-1	92-823506-1
Loctite 271 – Thread Locker (10 ml) tube	92-809819	92-809819
Loctite 567 PST Pipe Sealant (50 ml) tube	92-809822	92-809822
Loctite Master Gasket Kit	92-12564-2	92-12564-2
2 Cycle Premium Outboard Oil [1 Gallon (3.7 liter)]	92-802815A1	92-802815Q1
Perfect Seal [16 oz. (0.45 kg)] can	92-34227-1	92-34227-1
Liquid Neoprene [8 oz. (226.8 grams)] can	92-25711-3	92-25711-3
Cyanacrylate Adhesive	Obtain Locally	Obtain Locally
Bellows Adhesive	N/A	92-86166Q1
Loctite 680 Retaining Compound (10 ml) tube	92-809833	92-809833
Loctite 222 Thread Locker (10 ml) tube	92-809818	92-809818
3M Permabond #3M08155	Obtain Locally	Obtain Locally
Loctite 242 Thread Locker (10 ml) tube	92-809821	92-809821
Loctite 609	Obtain Locally	Obtain Locally
Loctite 405	Obtain Locally	Obtain Locally
SAE 10W Oil	Obtain Locally	Obtain Locally
Moly Grease	Obtain Locally	Obtain Locally
Power Tune Engine Cleaner [13 oz. (384 ml)] spray can	92-802878 57	92-802878Q57
Corrosion Guard [11 oz. (325 ml)] spray can	92-802878 55	92-802878Q55
Fuel System Treatment & Stabilizer [12 oz. (355 ml)] plastic bottle	92-802875A1	92-802875Q1



Description	Mercury Part Number	Quicksilver Part Number
RTV 587 Silicone Sealer [3 oz. (85.05 grams)]	92-809825	92-809825
Loctite 262	Obtain Locally	Obtain Locally
Premium Gear Lubricant [1 Quart (0.94 liter)]	92-802846A1	92-802846Q1
Loctite 7649 Primer [4.5 oz (127.57 grams)]	92-809824	92-809824
Anti-Corrosion Grease [8 oz. (226.8 grams)] tube	92-802867A1	92-802867Q1
2-4-C with Teflon [8 oz. (226.8 grams)] tube	92-802859A1	92-802859Q1
Loctite Quick Tite	Obtain Locally	Obtain Locally
Isopropyl Alcohol	Obtain Locally	Obtain Locally
Hot Glue	Obtain Locally	Obtain Locally
Special Lubricant 101 [8 oz. (226.8 grams)] tube	92-802865A1	92-802865Q1
4 Stroke 10W30 Outboard Oil [1 Quart (0.94 liter)]	92-802833A1	92-802833Q1
4 Cycle 25W40 Engine Oil [1 Quart (0.94 liter)]	92-802837A1	92-802837Q1
Power Trim & Steering Fluid [8 oz. (226.8 grams)]	92-802880A1	92-802880Q1
Engine Coupler Spline Grease [14 oz. (0.39 kg)] cartridge	92-802869A1	92-802869Q1



Torque Specifications

Fastener Location	Diameter x Length (mm)	Torque		
		lb-in.	lb-ft	Nm
ELECTRICAL				
Flywheel				
Cover Screw	M6 x 25	45		5
Stator Screw		85		9.6
Flywheel Nut			116	157
Electrical Components				
Solenoid – Ignition Wire Nut	8-32 (in.)	25		3
Solenoid – Battery Cable Nut	1/4-20 (in.)	60		7
Starter Mounting (Electric)	M8 x 45		22	29
Starter Mounting (Manual)	M8 x 25		22	29
Solenoid Mounting Screw (Electric)	M6 x 30	75		8.5
Solenoid Mounting Screw (Manual)	M6 x 16	75		8.5
Crank Position Sensor Mounting Screw	M5 x 16	45		5
ECM Mounting Screw	M6 x 40	45		5
Sparkplug	12mm	150		17
Coil Mounting Screw	M6 x 30	75		8.5
Voltage Regulator Mounting Screw	M6 x 40	105		12
Temperature Sensor Retainer Screw	M6 x 13	75		8.5
Starter Motor Through Screw		70		8.0
FUEL SYSTEM				
Fuel Pump				
Assembly Through Screw			Drive Tight	
Check Valve Screw			Drive Tight	
Mounting Screw	M6 x 30	75		8.5
Carburetor				
Mounting Screw	M6 x 25	75		8.5
Mounting Screw	M6 x 100	75		8.5



Fastener Location	Diameter x Length (mm)	Torque		
		lb-in.	lb-ft	Nm
POWERHEAD				
Cylinder Head				
* Cylinder Head Screws	M9 x 95		34.5	47
* Cylinder Head Screws	M6 x 25	106		12
Anode Cover Screw	M6 x 20	70		8
Cylinder Head Cover Screws	M6 x 20	70		8
Intake/Exhaust Valves				
Valve Adjusting Nuts	M6	120		13.5
Rocker Arm Shaft Screws	M8 x 30		13	18
Camshaft/Oil Pump				
Driven Gear Screw	M8 x 40		28	38
Oil Pump Mounting Screw	M6 x 35	70		8
Oil Pump Cover Screw		70		8
Camshaft Retaining Screw		57		6.5
Cylinder Block/Crankcase				
* Crankcase Cover Screws – Center	M8 x 82		22	30
Crankcase Cover Screws – Outer	M6 x 35	106		12
Cover Screw	M6 x 20	115		13
Exhaust and Thermostat Cover Screws	M6 x 35	106		12
Connecting Rod Screws	Special	150		17
Oil Filter	N/A	70		8
Oil Filter Nipple	N/A		29.5	40
Powerhead Mounting Screws			20	38
Lifting Eye Screw	M8 x 35		17.5	24
Breather Cover Screw	M6 x 20	115		13
Balance Piston Nut			116	158

NOTE: * = Must be tightened in sequence and two stages. See appropriate section.



Fastener Location	Diameter x Length (mm)	Torque		
		lb-in.	lb-ft	Nm
MID-SECTION				
Clamp Bracket / Swivel Bracket				
Grease Fittings		33		3.5
* Tilt Tube Nut			32	43.5
* Link Rod Nylon Insert Nut			20	
Anode Screw	M6x25	60		6.8
Clamp Bracket Stud Nut	M10 x 1.5		28	37.9
Thumb Screw Assembly		60		7
Reverse Lock Link Nut		90		10
Gas Assist Trim Anchor Pin Nut			17.5	23.5
Gas Assist Trim Lever Arm Link Nut		90		10
Driveshaft Housing				
Adaptor Plate Mounting Screw			28	38
Oil Drain Plug	N/A		17.5	23.5
Gear Housing Mounting Stud	M10	144		16.5
Mounting Stud Nut	M10		40	54.5
Driveshaft Housing Mounting Screw	M8 x 45		28	38
Adaptor Plate				
Adaptor Plate Screw	M6 x 1 x 20	75		8.5
Oil Pressure Relief Body	N/A		34	46
Steering Arm				
Co-Pilot Plate Screw (Shoulder)	1/4-20 x 0.68 in.	70		8
Upper Mount Screw/Nut	M6 x 20	130		14.5
Steering Arm Bracket Screw	M10 x 30		32.5	44
Upper Mount Bolt/Nuts	M12 x 154		50	68
Lower Mount Screw/Nut	M10 x 105		32.5	44
Ground Screws	10-16 x 0.38	Drive Tight		
Power Trim				
Shock Rod Piston	N/A		45	61
Cylinder End Cap	N/A		45	61
Tilt Relief Assembly Plug	N/A	120		13.5
Suction Seat Assembly Plug	N/A	120		13.5
Pilot Check Valve Plug	N/A	120		13.5
Pump Assembly Screw	10-32 x 1-1/4 in.	70		8
Motor Assembly Screw	1/4-28 x 5/8 in.	80		9.0
Manual Release Valve	N/A	Drive Tight		
Reservoir Plug	N/A	Drive Tight		
Power Trim Anchor Pin Nut	14mm		18	24.5

NOTE: * = Tighten to specified torque, then back off 1/4 turn.



Fastener Location	Diameter x Length (mm)	Torque		
		lb-in.	lb-ft	Nm
Manual Tilt Assist				
Shock Rod Piston	N/A		45	61
Cylinder End Cap	N/A		45	61
Anchor Pin Nuts	14mm		17.5	23.5
LOWER UNIT				
Bigfoot Gear Housing				
Bearing Carrier Nut	M8 x 25		16.5	22.5
Input Shaft Nut			50	68
Water Pump Cover Screws	M6 x 16	60		7
Vent, Fill/Drain, Oil Level Screw	N/A	60		7
Gear Housing Mounting Bolt/Nut			40	54
Trim Tab Screw	M8 x 20		16	21.5
Propeller Nut	N/A		55	75
CONTROL LINKAGE				
Throttle/Shift Linkage				
Throttle/Shift Lever Screw	M8 x 70	100		11.3
Throttle Cam Mounting Screw	M6 x 35	85		9.6
Throttle Cable Bracket Screws – Electric Handle Models	M3 x 20	20		2.5
Throttle Cable Bracket Screws – Manual Handle Models	M6 x 16	75		8.5
Shift Spring Screw	M5 x 16	45		5
Neutral Start Switch Screws	M3 x 20	20		2.3
Tiller Handle				
Tiller Mounting Bracket Screws	M10 x 90		35	47.5
Shift Handle Screw	M8 x 35	100		11.5
Tiller Mount Cover Screws	M8 x 25	135		15.5
Pulley Case Screws Self Tapping	10-16 x ½ in.	20		2.5
Stop Wire Retaining Screw	M5 x 16	35		4
Pulley Cover Screw		20		2.5