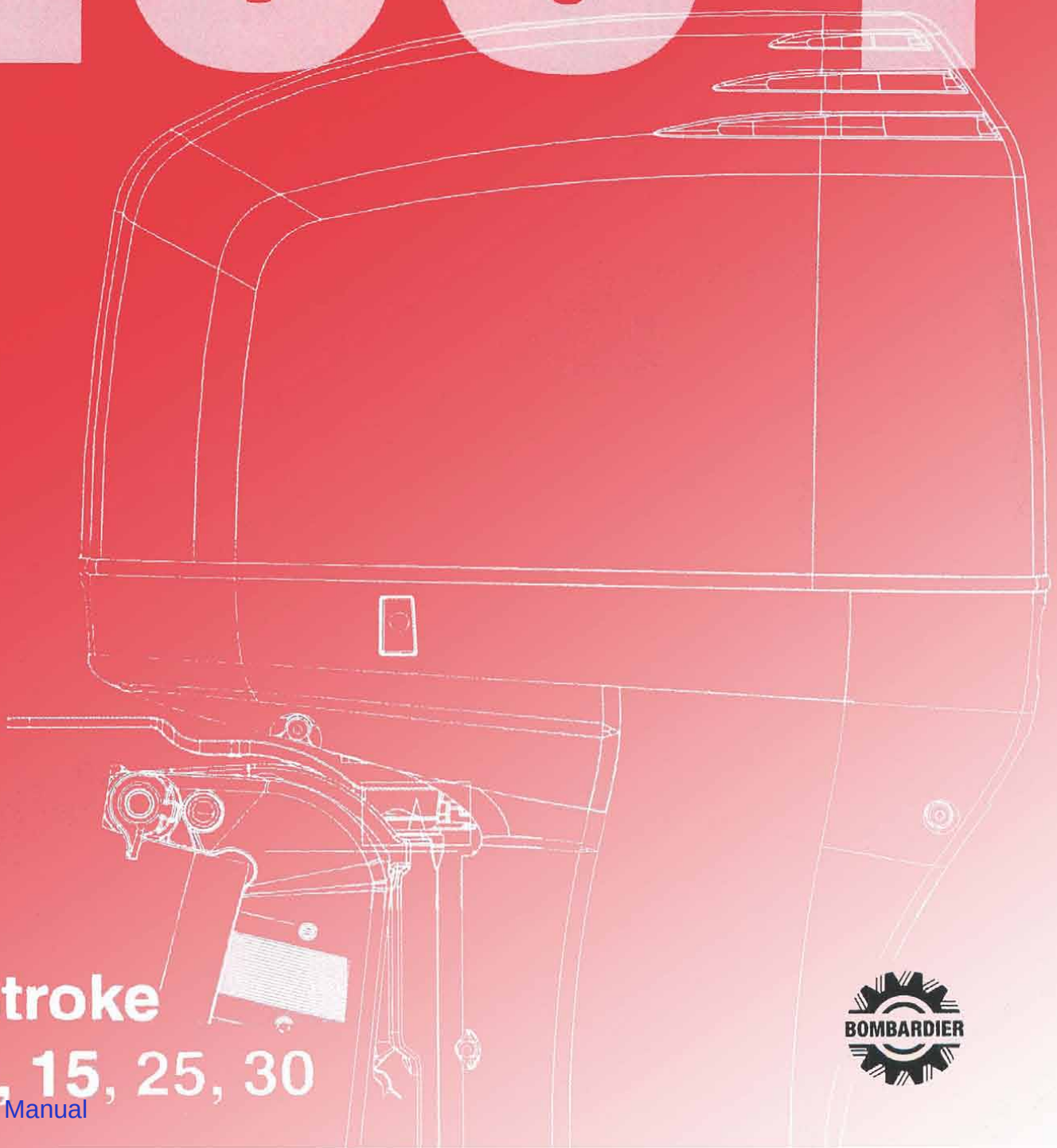
Service Manual

Johnson®

2004



2 Stroke

9.9, 15, 25, 30

BOMBARDIER

ARRANGEMENT OF THIS MANUAL

This manual is divided into 13 major sections:

INTRODUCTION
1. SPECIAL TOOLS & SERVICE SPECS
2. INSTALLATION AND PREDELIVERY
3. MAINTENANCE
4. ELECTRICAL
5. IGNITION
6. FUEL SYSTEM
7. POWERHEAD
8. MIDSECTION
9. GEARCASE
10. MANUAL STARTER
11. SAFETY

WIRING DIAGRAMS

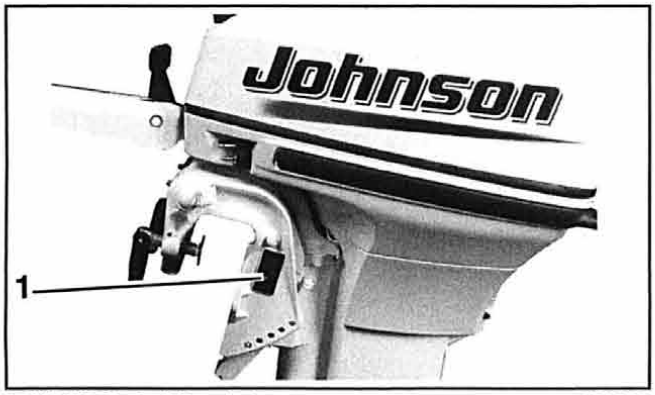
MODELS COVERED IN THIS MANUAL

This manual covers service information on *Johnson* 9.9 through 30 HP 2-Stroke models. Use this manual together with the proper Parts Catalog for part numbers and for exploded views of the outboard, which are a valuable aid to disassembly and reassembly.

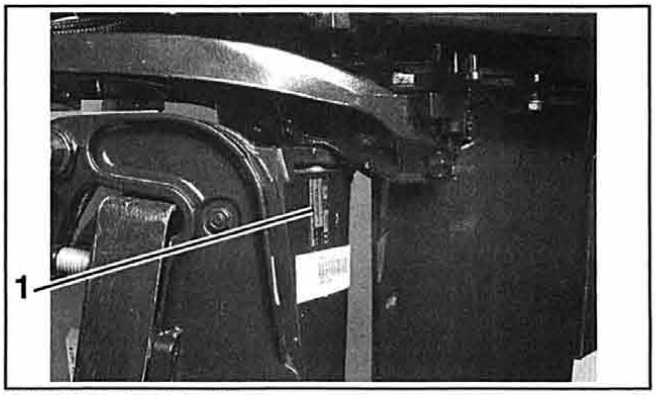
This manual presents the U.S. values and dimensions first and the metric values and dimensions second, inside parentheses ( ).

IDENTIFYING MODEL AND SERIAL NUMBERS

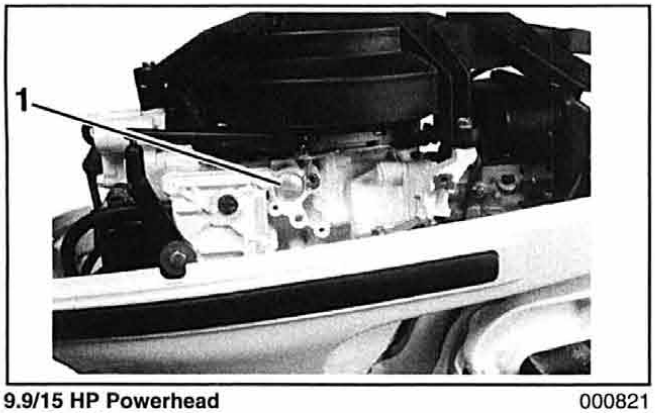
Outboard model and serial numbers are located on the swivel bracket and on the powerhead.



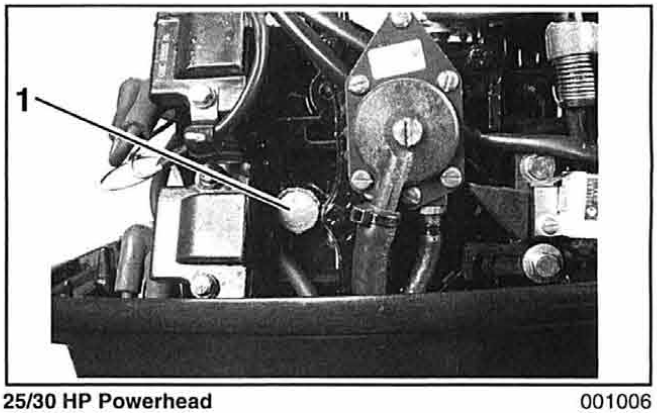
9.9/15 HP Swivel Bracket 000820
1. Model and serial number



25/30 HP Swivel Bracket 001005
1. Model and serial number



9.9/15 HP Powerhead 000821
1. Serial number



25/30 HP Powerhead 001006
1. Serial number

TECHNICAL DATA

ENGINE	**HP**	**9.9, 15**	**25, 30**
	Full Throttle Operating Range RPM	**9.9 HP:** 5000-6000 **15 HP:** 5500-6500	**25 HP:** 4500-5500 **30 HP:** 5200-5800
	Power	9.9 HP (7.5 kw) @ 5500 RPM 15 HP (11.2 kw) @ 6000 RPM	25 HP (18.7 kw) @ 5000 30 HP (22.4 kw) @ 5500
	Idle RPM in Gear	700 ± 50	675 ± 25
	Weight	**R Models:** 74 lbs. (34 kg) **RL Models:** 77 lbs. (35 kg)	**R, TE Models:** 117 lbs. (53 kg) **RL, EL Models:** 122 lbs. (55 kg) **TEL Models:** 124 lbs. (56 kg)
	Lubrication	*Evinrude/Johnson* XD30 formula outboard oil Refer to **Engine Lubricant** on p. 51.	
	Engine Type	In-line 2 cylinder	In-line 2 cylinder
	Displacement	15.6 cu. in. (255 cm^3)	32 cu. in. (521 cm^3)
	Bore	2.375 in. (60.33 mm)	3.000 in. (76.20 mm)
	Stroke	1.760 in. (44.70 mm)	2.250 in. (57.15 mm)
	Standard Bore	2.3745 to 2.3750 in. (60.31 to 60.33 mm)	2.9995 to 3.0005 in. (76.19 to 76.21 mm)
		To bore oversize, add piston oversize dimension to standard bore	
	Top Crankshaft Journal	0.8757 to 0.8762 in. (22.24 to 22.26 mm)	1.2510 to 1.2515 in. (31.78 to 31.79 mm)
	Center Crankshaft Journals	0.8120 to 0.8125 in. (20.63 to 20.64 mm)	1.1833 to 1.1838 in. (30.06 to 30.07 mm)
	Bottom Crankshaft Journal	0.7870 to 0.7874 in. (19.98 to 19.99 mm)	0.9842 to 0.9846 in. (25.00 to 25.01 mm)
	Rod Crankpin	0.8120 to 0.8125 in. (20.63 to 20.64 mm)	1.1823 to 1.1828 in. (30.03 to 30.04 mm)
	Piston Ring End Gap, Both	0.005 to 0.015 in. (0.13 to 0.38 mm)	0.007 to 0.017 in. (0.18 to 0.43 mm)
	Lower Piston Ring Groove Side Clearance	0.004 in (0.10 mm) maximum	
	Test Propeller	340177	434505
	Minimum Test RPM	**9.9 HP:** 4900 **15 HP:** 5700	**25 HP:** 4800 **30 HP:** 5400
FUEL	Fuel/Oil Ratio	50:1	
	Carburetion	One single-throat carburetor, float feed	
	Calibration	Adjustable low speed; Fixed high speed	Adjustable low speed; Fixed intermediate and high speed
	Low-Speed Setting	Refer to **FUEL SYSTEM** section.	
	Starting Enrichment	Manual choke	**R, RL, TE, TEL Models:** Manual primer **EL Models:** Electric primer solenoid
	Carburetor Float Level Setting	Float gauge, P/N 324891	
	Carburetor Float Drop Setting	1 to 1 3/8 in. (25 to 35 mm)	1 1/8 to 1 5/8 in. (28 to 41 mm)
	Preferred Fuel	Regular unleaded, plus grade unleaded, premium unleaded gasolines	
	Acceptable Fuel	Any of the above gasolines with 10% Ethanol or 5% Methanol with 5% co-solvents	
	Minimum Octane	87 AKI (R+M)/2 or 90 RON	
	Additives	*2+4 Fuel Conditioner, Fuel System Cleaner, Carbon Guard* Use only Bombardier recommended fuel additives. The use of other additives may result in engine damage.	
		See **FUEL REQUIREMENTS** on p. 48 for additional information.	