

CLYMER™

YAMAHA

OUTBOARD SHOP MANUAL

2-250 HP 2-STROKE • 1990-1995 (Includes Jet Drives)

Contents

QUICK REFERENCE DATA IX

CHAPTER ONE

GENERAL INFORMATION 1

Manual organization	1	Lubricants	8
Notes, cautions and warnings	1	Gasket sealant	10
Torque specifications	2	Galvanic corrosion	11
Engine operation	2	Protection from galvanic corrosion	13
Fasteners	2	Propellers	14

CHAPTER TWO

TOOLS AND TECHNIQUES 21

Safety first	21	Service hints	28
Basic hand tools	21	Special tips	30
Test equipment	26	Mechanic's techniques	31

CHAPTER THREE

TROUBLESHOOTING 33

Operating requirements	34	CDI ignition testing	46
Starting system	34	Fuel enrichment system	75
Charging system	40	Fuel system	75
Ignition system	44	Engine temperature and overheating	77
Breaker point ignition testing (1990-1994 2 hp engine)	45	Power head	77

CHAPTER FOUR

LUBRICATION, MAINTENANCE AND TUNE-UP 90

Lubrication	90	Complete submersion	101
Storage	98	Engine flushing	102
Anti-corrosion maintenance	100	Tune-up	103

CHAPTER FIVE

TIMING, SYNCHRONIZATION AND ADJUSTMENT 121

Engine timing and synchronization.....	121	C40 (2-cylinder) models.....	150
1990-1994 2 hp models.....	123	40 hp, 50 hp and Pro 50 (3-cylinder) models.....	155
1995 2 hp models.....	124	C55 models.....	159
3 hp models.....	125	Pro 60, 70 hp and 90 hp models.....	161
4 hp and 5 hp models.....	126	C75 hp and C85 models.....	168
6 hp and 8 hp models.....	129	C115 models.....	172
9.9 hp and 15 hp models.....	132	115 hp, Pro V 115, 130 hp V4, 150 hp, Pro V 150, 175 hp, Pro V 175, 200 hp, Pro V 200 and 225 hp 90° V6 models.....	176
C25 models.....	136	225 hp, 250 hp 76° V6 models.....	183
25 hp models.....	138		
C30 (2-cylinder) models.....	141		
30 hp (3-cylinder) models.....	145		

CHAPTER SIX

FUEL SYSTEM 197

Fuel system connections.....	197	Twin-barrel carburetor (115-130 hp V4 and 150-225 hp 90° V6).....	241
Fuel pumps.....	198	Carburetor cleaning and inspection (all models).....	248
Prime start system.....	205	Float adjustment.....	250
Carburetors.....	206	Primer assembly (225 hp 90° V6).....	251
Throttle plunger carburetor (2 hp).....	206	Fuel filter.....	253
Integral fuel pump carburetor.....	211	Reed valve assembly.....	255
Center bowl carburetor (C25).....	221	Integral fuel tank (2-5 hp).....	257
Center bowl carburetor (C30, C40, C75 and C85).....	225	Portable fuel tank (7-250 hp).....	262
Center bowl carburetor (C55).....	228	Fuel line and primer bulb.....	263
Center bowl carburetor (40, 50, 70 and 90 hp and Pro 50 and Pro 60).....	232	Anti-siphon devices.....	263
Center bowl carburetor (225, 250 hp 76° V6).....	237		

CHAPTER SEVEN

IGNITION AND ELECTRICAL SYSTEMS..... 272

Electrical connector adapters.....	272	Capacitor discharge ignition (2-55 hp and Pro 50 models).....	293
Battery.....	273	Capacitor discharge ignition (75-200 hp [except 1992-on 90 hp]).....	297
Battery charging system.....	280	Yamaha microcomputer ignition system (YMIS) (1992-on Pro 60, 70 hp, 90 hp 3-cylinder and all 225-250 hp V6 models).....	300
Electric starting system.....	283		
Ignition systems.....	291		
Magneto breaker point ignition (1990-1994 2 hp).....	291		

CHAPTER EIGHT

POWER HEAD..... 304

Fasteners and torque.....	305	Power head removal/installation.....	309
Engine serial number.....	306	Power head disassembly.....	334
Gaskets and sealants.....	306	Crankshaft assembly and cylinder block.....	375
Flywheel.....	307	Power head assembly.....	406

CHAPTER NINE

GEARCASE AND DRIVE SHAFT HOUSING 460

Service precautions and notes	461	Forward gear or reverse gear ("L" models) and bearing assembly	571
Propeller	462	Gearcase housing	578
Water pump	465	Pinion gear depth and gear backlash	578
Gearcase	474	Trim tab and anode	590
Gearcase disassembly/inspection/reassembly	487	Pressure and vacuum test	590
Pinion gear and driveshaft	555		
Shift shaft	565		

CHAPTER TEN

JET DRIVES 593

Maintenance	594	Bearing housing	604
Water pump	601	Intake housing liner	607
Jet drive	603		

CHAPTER ELEVEN

AUTOMATIC REWIND STARTERS. 608

CHAPTER TWELVE

POWER TRIM AND TILT SYSTEMS 615

Power tilt system	617	Power trim/tilt system	621
-------------------------	-----	------------------------------	-----

CHAPTER THIRTEEN

OIL INJECTION SYSTEM. 633

System components	635	Oil injection system service	639
Operation	635	Component replacement	643
Oil level warning system	637		

CHAPTER FOURTEEN

YAMAHA 703 REMOTE CONTROL BOX 653

INDEX. 660

WIRING DIAGRAMS 664