



Presents

Repair Manuals from **SELOC.**

Contents of this manual:

1	GENERAL INFORMATION, SAFETY AND TOOLS	HOW TO USE THIS MANUAL	1-2
		BOATING SAFETY	1-4
		BOATING EQUIPMENT (NOT REQUIRED BUT RECOMMENDED)	1-10
		SAFETY IN SERVICE	1-13
		TROUBLESHOOTING	1-13
		SHOP EQUIPMENT	1-17
		TOOLS	1-19
		FASTENERS, MEASUREMENT, AND CONVERSIONS	1-27
		SPECIFICATIONS	1-28
		<hr/>	
2	MAINTENANCE AND TUNE-UP	GENERAL INFORMATION	2-2
		LUBRICATION	2-5
		ENGINE MAINTENANCE	2-10
		BOAT MAINTENANCE	2-27
		TUNE-UP	2-30
		TIMING AND SYNCHRONIZATION	2-44
		CLEARING A SUBMERGED MOTOR	2-87
		SPECIFICATIONS	2-88
<hr/>			
3	FUEL SYSTEM	FUEL AND COMBUSTION BASICS	3-2
		FUEL TANK AND LINES	3-6
		CARBURETED FUEL SYSTEM	3-11
		CARBURETOR SERVICE	3-17
		ELECTRONIC FUEL INJECTION SYSTEMS	3-66
		FUEL PUMP (LOW PRESSURE) SERVICE	3-99
		SPECIFICATIONS	3-105
<hr/>			
4	IGNITION AND ELECTRICAL	UNDERSTANDING AND TROUBLESHOOTING	
		ELECTRICAL SYSTEMS	4-2
		IGNITION SYSTEMS	4-8
		CHARGING CIRCUIT	4-38
		CRANKING CIRCUIT	4-43
		ELECTRICAL SWITCH/SOLENOID SERVICE	4-53
		SPECIFICATIONS	4-57
		WIRING DIAGRAMS	4-65
<hr/>			
5	LUBRICATION AND COOLING	PRECISION BLEND OIL INJECTION SYSTEMS	5-2
		OIL INJECTION WARNING SYSTEM	5-20
		COOLING SYSTEM	5-27
		SPECIFICATIONS	5-49

CONTENTS

POWERHEAD MECHANICAL 6-2
POWERHEAD REFINISHING 6-67
POWERHEAD BREAK-IN 6-79
SPECIFICATIONS 6-80

POWERHEAD

6

LOWER UNIT 7-2
GEARCASE OVERHAUL 7-10
JET DRIVE 7-78

LOWER UNIT

7

TRIM & TILT SYSTEMS 8-2
HYDRO TILT LOCK SYSTEM 8-2
SINGLE TILT RAM POWER TRIM/TILT SYSTEMS 8-3
LARGE MOTOR POWER TRIM/TILT SYSTEM 8-13

TRIM AND TILT

8

REMOTE CONTROLS 9-2

REMOTE CONTROL

9

HAND REWIND STARTER 10-2

HAND REWIND STARTER

10

MASTER INDEX 10-22

MASTER INDEX

ANCHORS	1-10	THERMO-SWITCH	5-46
ANODES (ZINCS)	2-25	TROUBLESHOOTING	5-28
INSPECTION	2-26	WATER PUMP	5-31
SERVICING	2-26	CRANKING CIRCUIT	4-43
BASIC ELECTRICAL THEORY	4-2	DESCRIPTION AND OPERATION	4-43
BASIC OPERATING PRINCIPLES	1-13	FAULTY SYMPTOMS	4-43
BATTERIES	2-27	MAINTENANCE	4-43
MAINTENANCE	2-27	STARTER MOTOR	4-46
STORAGE	2-29	STARTER MOTOR CIRCUIT	4-43
TESTING	2-28	STARTER MOTOR RELAY/SOLENOID	4-45
BLEED SYSTEM	6-69	CRANKSHAFT	6-71
BOAT MAINTENANCE	2-27	CRANKSHAFT POSITION SENSOR (CPS)	4-35
BATTERIES	2-27	CRANKSHAFT POSITION SENSOR (CPS)/PULSER COIL	3-82
FIBERGLASS HULL	2-29	CYLINDER BLOCK	6-75
INTERIOR	2-30	ELECTRICAL COMPONENTS	4-2
BOATING EQUIPMENT (NOT REQUIRED BUT RECOMMENDED)	1-10	ELECTRICAL SYSTEM CHECKS	2-38
ANCHORS	1-10	CHECKING THE BATTERY	2-38
BAILING DEVICES	1-10	CHECKING THE INTERNAL WIRING HARNESS	2-39
COMPASS	1-11	CHECKING THE STARTER MOTOR	2-39
FIRST AID KIT	1-10	ELECTRICAL SYSTEM PRECAUTIONS	4-7
OAR/PADDLE (SECOND MEANS OF PROPULSION)	1-10	ELECTRICAL SWITCH/SOLENOID SERVICE	4-53
TOOLS AND SPARE PARTS	1-12	KILL SWITCH	4-53
VHF-FM RADIO	1-10	MAIN KEYSWITCH	4-53
BOATING SAFETY	1-4	NEUTRAL SAFETY SWITCH	4-55
COURTESY MARINE EXAMINATIONS	1-10	START BUTTON	4-54
REGULATIONS FOR YOUR BOAT	1-4	TETHER	4-54
REQUIRED SAFETY EQUIPMENT	1-6	WARNING BUZZER/HORN	4-56
BOLTS, NUTS AND OTHER THREADED RETAINERS	1-27	ELECTRICAL TESTING	4-6
BREAK-IN PROCEDURES	6-79	ELECTRONIC FUEL INJECTION SYSTEMS	3-66
CARBURETED FUEL SYSTEM	3-11	CONTROLLED COMBUSTION SYSTEM	3-58
DESCRIPTION AND OPERATION	3-12	CRANKSHAFT POSITION SENSOR (CPS)/PULSER COIL	3-82
TROUBLESHOOTING THE CARBURETED FUEL SYSTEM	3-14	ENGINE CONTROL MODULE (ECM/CDI)	3-79
CARBURETOR IDENTIFICATION	3-17	FUEL INJECTION AND ELECTRONIC COMPONENT LOCATIONS	3-89
CARBURETOR SERVICE	3-17	FUEL INJECTION BASICS	3-55
CARBURETOR IDENTIFICATION	3-17	FUEL PRESSURE REGULATOR	3-79
2 HP MODELS	3-17	FUEL RAIL AND INJECTORS (EFI)	3-74
3 HP MODELS	3-22	HIGH-PRESSURE (MECHANICAL) FUEL PUMP, FUEL RAILS AND INJECTORS (HPDI)	3-72
4/5 HP (83CC AND 103CC) MODELS	3-24	KNOCK SENSOR (3.1L EFI OX66 MOTORS)	3-86
6/8 HP AND 9.9/15 HP MODELS	3-28	HPDI DRIVE BELT AND SPROCKETS	3-68
20-48 HP (2-CYLINDER) MODELS	3-35	HPDI INJECTOR DRIVER	3-70
3-CYLINDER POWERHEADS	3-40	NEUTRAL OR SHIFT POSITION SWITCHES	3-89
V4 & V6 POWERHEADS	3-49	OXYGEN SENSOR (EFI OX66 AND SOME HPDI)	3-87
CDI/TCI SYSTEMS	4-8	PRESSURE SENSORS (APS AND FPS)	3-85
CDI/TCI UNIT AND IGNITION COILS	4-30	SELF DIAGNOSTIC SYSTEM	3-60
CDI UNIT TEST CHARTS	4-18	SENSOR AND CIRCUIT RESISTANCE/OUTPUT TESTS	3-61
CHARGING CIRCUIT	4-38	TEMPERATURE SENSORS (AIR AND WATER/ENGINE)	3-83
BATTERY	4-40	THROTTLE BODY AND INTAKE ASSEMBLY	3-62
YAMAHA CHARGING SYSTEMS	4-38	THROTTLE POSITION SENSOR (TPS)	3-82
CHOKE SWITCH	9-2	TROUBLESHOOTING ELECTRONIC FUEL INJECTION	3-59
CLEARING A SUBMERGED MOTOR	2-87	YAMAHA EFI OX66 INJECTION	3-56
COMBUSTION	3-6	YAMAHA HIGH PRESSURE DIRECT INJECTION (HPDI)	3-57
COMPRESSION TESTING	2-32	VAPOR SEPARATOR TANK AND HIGH-PRESSURE FUEL PUMP	3-64
COMPRESSION CHECK	2-32	WATER DETECTION SENSOR (HPDI)	3-88
LOW COMPRESSION	2-33	ELECTRONIC IGNITION SYSTEMS	2-38
CONNECTING RODS	6-73	ELECTRONIC TOOLS	1-23
CONTROL BOX ASSEMBLY	9-4	ENGINE CONTROL MODULE (ECM/CDI)	3-79
ASSEMBLY & INSTALLATION	9-6	ENGINE COVERS	2-10
CLEANING & INSPECTION	9-6	ENGINE IDENTIFICATION	2-2
REMOVAL & DISASSEMBLY	9-4	ENGINE MODEL & SERIAL NUMBERS	2-3
CONTROLLED COMBUSTION SYSTEM	3-58	ENGINE MAINTENANCE	2-10
COOLING SYSTEM	5-27	ANODES (ZINCS)	2-25
DESCRIPTION AND OPERATION	5-27	COOLING SYSTEM	2-11
FLUSHING JET DRIVES	2-13	ENGINE COVERS	2-10
FLUSHING THE COOLING SYSTEM	2-11	ENGINE OIL	2-13
THERMOSTAT	5-41	FUEL FILTER	2-15

10-20 MASTER INDEX

JET DRIVE IMPELLER	2-24	GEARCASE (LOWER UNIT) OIL	2-7
PROPELLER	2-18	CHECKING LEVEL & CONDITION	2-7
ENGINE OIL	2-13	DRAINING AND FILLING	2-8
CHECKING	2-15	OIL RECOMMENDATIONS	2-7
FILLING	2-14	GEARCASE OVERHAUL	7-10
RECOMMENDATIONS	2-13	OVERHAUL TIPS	7-10
EXHAUST COVER	6-69	2 AND 3 HP (1-CYLINDER) MODELS	7-11
EXHAUST GASES	7-3	4-40 HP 1-, 2- AND 3-CYLINDER MODELS	
FASTENERS, MEASUREMENTS AND CONVERSIONS	1-27	(EXCEPT 40/50 HP/698CC)	7-19
BOLTS, NUTS AND OTHER THREADED RETAINERS	1-27	48 HP 2-CYLINDER, 40/50 HP AND LARGER 3-CYLINDER	
STANDARD AND METRIC MEASUREMENTS	1-27	& ALL V4/V6 MODELS	7-43
TORQUE	1-27	GENERAL INFORMATION	2-2
FIBERGLASS HULL	2-29	BEFORE/AFTER EACH USE	2-4
FIRST AID KIT	1-10	ENGINE IDENTIFICATION	2-2
FLYWHEEL AND STATOR PLATE	4-23	MAINTENANCE COVERAGE IN THIS MANUAL	2-2
FUEL	3-2	MAINTENANCE EQUALS SAFETY	2-2
ALCOHOL-BLENDED FUELS	3-3	OUTBOARDS ON SAIL BOATS	2-2
CHECKING FOR STALE/CONTAMINATED FUEL	3-3	HAND REWIND STARTER	10-2
HIGH ALTITUDE OPERATION	3-3	2 Hp (43 and 50cc) and 3 Hp Models	10-2
OCTANE RATING	3-3	4-50 Hp Models (Except 9.9/15 hp and 48 Hp Motors)	10-6
THE BOTTOM LINE WITH FUELS	3-3	9.9/15 Hp Models	10-11
VAPOR PRESSURE	3-3	48 Hp and Larger Models	10-13
FUEL AND COMBUSTION BASICS	3-2	HAND TOOLS	1-19
COMBUSTION	3-6	HIGH-PRESSURE (MECHANICAL) FUEL PUMP	
FUEL SYSTEM SERVICE CAUTIONS	3-2	FUEL RAILS AND INJECTORS (HPDI)	3-72
FUEL	3-2	HOW TO USE THIS MANUAL	1-2
FUEL SYSTEM PRESSURIZATION	3-4	AVOIDING THE MOST COMMON MISTAKES	1-3
FUEL SYSTEM SERVICE CAUTIONS	3-2	AVOIDING TROUBLE	1-2
FUEL FILTER	2-15	CAN YOU DO IT?	1-2
FUEL INJECTION AND ELECTRONIC COMPONENT LOCATIONS	3-89	DIRECTIONS AND LOCATIONS	1-2
2.6L EFI OX66	3-89	MAINTENANCE OR REPAIR?	1-2
2.6L HPDI	3-92	PROFESSIONAL HELP	1-3
3.1L EFI OX66	3-94	PURCHASING PARTS	1-3
3.3L HPDI	3-97	WHERE TO BEGIN	1-2
FUEL LINES AND FITTINGS	3-8	HPDI DRIVE BELT AND SPROCKETS	3-68
SERVICE	3-10	REMOVAL & INSTALLATION	3-68
TESTING	3-8	HPDI INJECTOR DRIVER	3-70
FUEL PRESSURE REGULATOR	3-79	REMOVAL & INSTALLATION	3-71
REMOVAL & INSTALLATION	3-79	TESTING	3-70
TESTING	3-79	HYDRO TILT LOCK SYSTEM	8-2
FUEL PUMP (LOW-PRESSURE) SERVICE	3-99	DESCRIPTION & OPERATION	8-2
FUEL PUMPS	3-99	SERVICING THE HYDRO TILT SYSTEM	8-3
DESCRIPTION & OPERATION	3-99	IDLE SPEED ADJUSTMENT	2-43
GENERAL INFORMATION	3-100	IGNITION AND CHARGING SYSTEM TROUBLESHOOTING	4-12
OVERHAUL	3-103	IGNITION SYSTEMS	4-8
REMOVAL & INSTALLATION	3-102	CDI UNIT TEST CHARTS	4-18
TESTING	3-100	CDI/TCI SYSTEMS	4-8
FUEL RAIL AND INJECTORS (EFI)	3-74	CDI/TCI UNIT AND IGNITION COILS	4-30
REMOVAL & INSTALLATION	3-78	CRANKSHAFT POSITION SENSOR (CPS)	4-35
TESTING	3-74	FLYWHEEL AND STATOR PLATE	4-23
FUEL SYSTEM CHECKS	2-39	IGNITION AND CHARGING SYSTEM TROUBLESHOOTING	4-12
FUEL SYSTEM PRESSURIZATION	3-4	THERMO-SENSOR & THERMO-SWITCH	4-36
PRESSURIZING THE FUEL SYSTEM (CHECKING FOR LEAKS)	3-5	YAMAHA MICROCOMPUTER IGNITION SYSTEMS (YMIS)	4-33
RELIEVING FUEL SYSTEM PRESSURE (EFI & HPDI MOTORS)	3-5	INTERIOR	2-30
FUEL SYSTEM SERVICE CAUTIONS	3-2	JET DRIVE	7-78
FUEL TANK	3-6	DESCRIPTION & OPERATION	7-78
FUEL TANK AND LINES	3-6	JET DRIVE ADJUSTMENTS	7-88
FUEL LINES AND FITTINGS	3-8	JET DRIVE ASSEMBLY	7-79
FUEL TANK	3-6	MODEL IDENTIFICATION & SERIAL NUMBERS	7-78
GEARCASE (LOWER UNIT)	7-4	JET DRIVE ADJUSTMENTS	7-88
REMOVAL & INSTALLATION	7-4	GATE LINKAGE ADJUSTMENTS	7-88
2 AND 3 HP (1-CYLINDER) MODELS	7-4	TRIM ADJUSTMENT	7-92
4-40 HP 1-, 2- AND 3-CYLINDER MODELS (EXCEPT		JET DRIVE ASSEMBLY	7-79
40/50 HP/698CC)	7-6	ASSEMBLY	7-85
48 HP (2-CYLINDER), 40/50 HP (3-CYLINDER) & ALL		CLEANING & INSPECTION	7-80
V4/V6 MODELS	7-8	REMOVAL & DISASSEMBLY	7-79

JET DRIVE BEARING	2-9	PBS DIAGRAMS	5-10
JET DRIVE IMPELLER	2-24	POWERHEAD MOUNTED OIL TANK	5-16
KILL SWITCH	9-4	REMOTE OIL TANK	5-17
KILL SWITCH	4-53	OIL PUMP ASSEMBLY	5-18
KNOCK SENSOR (3.1L EFI OX66 MOTORS)	3-86	PRESSURE SENSORS (APS AND FPS)	3-85
LARGE MOTOR POWER TRIM/TILT SYSTEM	8-13	PREPPING THE MOTOR	2-44
DESCRIPTION & OPERATION	8-13	PROPELLER	2-18
MAINTENANCE	8-15	GENERAL INFORMATION	2-18
POWER TRIM/TILT SWITCH	8-19	INSPECTION	2-21
PTT ASSEMBLY (DUAL TRIM RAM)	8-21	REMOVAL & INSTALLATION	2-21
TRIM SENSOR	8-20	RE-COMMISSIONING	2-86
TRIM/TILT MOTOR	8-20	REED BLOCK	6-69
TRIM/TILT RELAY	8-18	INSPECTION	6-69
TROUBLESHOOTING	8-15	REED VALVES	3-104
LOWER UNIT	7-2	REED VALVE BLOCK	3-104
EXHAUST GASES	7-3	REGULATIONS FOR YOUR BOAT	1-4
GEARCASE (LOWER UNIT)	7-4	REMOTE CONTROL BOX	9-2
GENERAL INFORMATION	7-2	REMOTE CONTROLS	9-2
SHIFTING PRINCIPLES	7-2	CHOKE SWITCH	9-2
TROUBLESHOOTING	7-4	CONTROL BOX ASSEMBLY	9-4
LUBRICANTS	2-6	KILL SWITCH	9-4
LUBRICATION	2-5	NEUTRAL SAFETY SWITCH	9-3
GEARCASE (LOWER UNIT) OIL	2-7	REMOTE CONTROL BOX	9-2
JET DRIVE BEARING	2-9	START BUTTON	9-3
LUBRICANTS	2-6	WARNING BUZZER/HORN	9-2
LUBRICATING THE MOTOR	2-6	REMOTE OIL TANK	5-17
LUBRICATION INSIDE THE BOAT	2-7	REQUIRED SAFETY EQUIPMENT	1-6
POWER TRIM/TILT RESERVOIR	2-9	SAFETY IN SERVICE	1-13
MAIN KEYSWITCH	4-53	SAFETY TOOLS	1-17
MEASURING TOOLS	1-25	SELF DIAGNOSTIC SYSTEM	3-60
NEUTRAL OR SHIFT POSITION SWITCHES	3-89	READING	3-60
NEUTRAL SAFETY SWITCH	4-55	TROUBLE CODES	3-62
NEUTRAL SAFETY SWITCH	9-3	SENSOR AND CIRCUIT RESISTANCE/OUTPUT	3-61
OIL INJECTION WARNING SYSTEM	5-20	SHIFTING PRINCIPLES	7-2
GENERAL INFORMATION	5-20	COUNTER-ROTATING UNIT	7-3
OPERATIONAL CHECK	5-23	STANDARD ROTATING UNIT	7-2
TROUBLESHOOTING	5-22	SHOP EQUIPMENT	1-17
OIL PUMP ASSEMBLY	5-18	SINGLE TILT RAM POWER TRIM/TILT SYSTEMS	8-3
OXYGEN SENSOR (EFI OX66 AND SOME HPDI)	3-87	DESCRIPTION & OPERATION	8-3
PBS DIAGRAMS	5-10	MAINTENANCE	8-4
PISTONS	6-74	PTT ASSEMBLY	8-9
POWER TRIM/TILT RESERVOIR	2-9	TILT MOTOR	8-8
FLUID LEVEL/CONDITION	2-9	TILT RELAY	8-6
RECOMMENDED LUBRICANT	2-9	TILT SWITCH	8-7
POWERHEAD BREAK-IN	6-79	TRIM SENSOR	8-9
BREAK-IN PROCEDURES	6-79	TROUBLESHOOTING	8-6
POWERHEAD MECHANICAL	6-2	SPARK PLUG WIRES	2-38
GENERAL INFORMATION	6-2	SPARK PLUGS	2-33
2 HP (43 AND 50CC) AND 3 HP MODELS	6-4	SPECIAL TOOLS	1-23
4/5 HP (83 AND 103CC) MODELS	6-10	SPECIFICATIONS	1-28
6-48 HP (2-CYLINDER) POWERHEADS	6-15	CAPACITIES	2-96
25-90 HP (3-CYLINDER) POWERHEADS	6-25	CARBURETOR SET-UP	3-105
V4 AND V6 POWERHEADS	6-36	CHARGING SYSTEM	4-62
POWERHEAD MOUNTED OIL TANK	5-16	CONVERSION FACTORS	1-28
REMOVAL & INSTALLATION	5-16	COOLING SYSTEM	5-49
POWERHEAD REFINISHING	6-67	ENGINE	2-91
BLEED SYSTEM	6-69	GENERAL ENGINE - 1-CYLINDER MOTORS	6-80
CONNECTING RODS	6-73	GENERAL ENGINE - 2-CYLINDER MOTORS	6-83
CRANKSHAFT	6-71	GENERAL ENGINE - 3-CYLINDER MOTORS	6-89
CYLINDER BLOCK	6-75	GENERAL ENGINE - V4 MOTORS	6-93
EXHAUST COVER	6-69	GENERAL ENGINE - V6 MOTORS	6-94
GENERAL INFORMATION	6-67	IGNITION SYSTEM	4-57
PISTONS	6-74	LUBRICATION	2-95
REED BLOCK	6-69	MAINTENANCE INTERVALS	2-90
PRECISION BLEND OIL INJECTION SYSTEMS	5-2	METRIC BOLTS - TYPICAL TORQUE VALUES	1-28
GENERAL INFORMATION AND TROUBLESHOOTING	5-2	TUNE-UP	2-88

10-22 MASTER INDEX

U.S. STANDARD BOLTS - TYPICAL TORQUE VALUES	1-28	LARGE MOTOR POWER TRIM/TILT SYSTEM	8-13
START BUTTON	4-54	SINGLE TILT RAM POWER TRIM/TILT SYSTEMS	8-3
STARTER MOTOR	9-3	TROUBLESHOOTING	1-13
STARTER MOTOR CIRCUIT	4-46	BASIC OPERATING PRINCIPLES	1-13
STARTER MOTOR RELAY/SOLENOID	4-43	CARBURETED FUEL SYSTEM	3-14
STORAGE	2-84	ELECTRICAL SYSTEMS	4-6
RE-COMMISSIONING	2-86	ELECTRONIC FUEL INJECTION	3-59
WINTERIZATION	2-84	LOWER UNIT	7-4
SYNCHRONIZATION	2-44	TUNE-UP	2-30
TEMPERATURE SENSORS (AIR AND WATER/ENGINE)	3-83	COMPRESSION TESTING	2-32
TEST EQUIPMENT	4-4	ELECTRICAL SYSTEM CHECKS	2-38
TETHER	4-54	ELECTRONIC IGNITION SYSTEMS	2-38
THERMOSTAT	5-41	FUEL SYSTEM CHECKS	2-39
EXPLODED VIEWS	5-43	IDLE SPEED ADJUSTMENT	2-43
REMOVAL & INSTALLATION	5-41	INTRODUCTION TO TUNE-UPS	2-30
THERMO-SENSOR & THERMO-SWITCH	4-36	SPARK PLUG WIRES	2-38
THERMO-SWITCH	5-46	SPARK PLUGS	2-33
THROTTLE BODY AND INTAKE ASSEMBLY	3-62	TUNE-UP SEQUENCE	2-31
THROTTLE POSITION SENSOR (TPS)	3-82	TUNE-UP SEQUENCE	2-31
TIMING	2-44	UNDERSTANDING AND TROUBLESHOOTING	
TIMING AND SYNCHRONIZATION	2-44	ELECTRICAL SYSTEMS	4-2
GENERAL INFORMATION	2-44	BASIC ELECTRICAL THEORY	4-2
PREPPING THE MOTOR	2-44	ELECTRICAL COMPONENTS	4-2
SYNCHRONIZATION	2-44	ELECTRICAL SYSTEM PRECAUTIONS	4-7
TIMING	2-44	ELECTRICAL TESTING	4-6
2 HP MODEL	2-45	TEST EQUIPMENT	4-4
3 HP MODEL	2-45	TROUBLESHOOTING ELECTRICAL SYSTEMS	4-6
4/5 HP (83 AND 103CC) MODELS	2-46	WIRE AND CONNECTOR REPAIR	4-7
6/8 HP MODELS	2-47	VAPOR SEPARATOR TANK AND HIGH-PRESSURE FUEL PUMP	3-64
9.9/15 HP MODELS	2-49	WARNING BUZZER/HORN	4-56
20/25 HP (395CC) MODELS	2-51	WARNING BUZZER/HORN	9-2
20/25 HP (430CC) MODELS	2-53	WATER DETECTION SENSOR (HPDI)	3-88
25/30 HP (496CC 2-CYLINDER) MODELS	2-54	WATER PUMP	5-31
40 HP (2-CYLINDER) MODEL	2-54	EXPLODED VIEWS	5-35
48 HP (2-CYLINDER) MODELS	2-57	INSPECTION & OVERHAUL	5-33
25/30 HP (496CC 3-CYLINDER) MODELS	2-61	REMOVAL & INSTALLATION	5-31
28J-50 HP (698CC) MODELS	2-66	WINTERIZATION	2-84
50-70 HP (849CC) AND 65J-90 HP (1140CC) MODELS	2-68	PREPPING FOR STORAGE	2-84
E60 (849CC) AND E75, E75A, 85A, E60J (1140CC) MOTORS	2-70	WIRE AND CONNECTOR REPAIR	4-7
V4 AND V6 CARBURETED MOTORS	2-74	WIRING DIAGRAMS	4-65
V6 EFI (OX66) AND HPDI MOTORS	2-79	INDEX	4-65
TOOLS	1-19	1-CYLINDER MOTORS	4-66
ELECTRONIC TOOLS	1-23	2-CYLINDER MOTORS	4-67
HAND TOOLS	1-19	3-CYLINDER MOTORS	4-74
MEASURING TOOLS	1-25	V4 MOTORS	4-88
OTHER COMMON TOOLS	1-22	V6 MOTORS	4-94
SPECIAL TOOLS	1-23	YAMAHA CHARGING SYSTEMS	4-38
TOOLS AND SPARE PARTS	1-12	YAMAHA EFI OX66 INJECTION	3-56
TRIM & TILT SYSTEMS	8-2	YAMAHA HIGH PRESSURE DIRECT INJECTION (HPDI)	3-57
HYDRO TILT LOCK SYSTEM	8-2	YAMAHA MICROCOMPUTER IGNITION SYSTEMS (YMIS)	4-33
INTRODUCTION	8-2	YMIS SELF-DIAGNOSIS	4-33
		TROUBLESHOOTING	4-35