
CONTENTS

| | | | | | |
|----------|--|---|------------------------------------|--------------------|-----|
| 1 | GENERAL INFORMATION, AND BOATING SAFETY | HOW TO USE THIS MANUAL | 1-2 | | |
| | | BOATING SAFETY | 1-3 | | |
| | | SAFETY IN SERVICE | 1-11 | | |
| 2 | TOOLS AND EQUIPMENT | TOOLS AND EQUIPMENT | 2-2 | | |
| | | TOOLS | 2-4 | | |
| | | FASTENERS, MEASUREMENTS AND CONVERSIONS | 2-12 | | |
| 3 | MAINTENANCE AND TUNE-UP | ENGINE MAINTENANCE | 3-2 | | |
| | | BOAT MAINTENANCE | 3-21 | | |
| | | TUNE-UP | 3-25 | | |
| | | WINTER STORAGE CHECKLIST | 3-38 | | |
| | | SPRING COMMISSIONING CHECKLIST | 3-38 | | |
| 4 | FUEL SYSTEM | FUEL SYSTEM BASICS | 4-2 | | |
| | | CARBURETION | 4-4 | | |
| | | FUEL INJECTION | 4-19 | | |
| 5 | IGNITION AND ELECTRICAL SYSTEMS | UNDERSTANDING AND TROUBLESHOOTING ELECTRICAL SYSTEMS | 5-2 | | |
| | | BREAKER POINTS IGNITION (MAGNETO IGNITION) | 5-7 | | |
| | | CAPACITOR DISCHARGE IGNITION (CDI) SYSTEM | 5-12 | | |
| | | ELECTRONIC IGNITION | 5-34 | | |
| | | CHARGING CIRCUIT | 5-35 | | |
| | | STARTING CIRCUIT | 5-43 | | |
| | | COMPONENT LOCATIONS | 5-48 | | |
| | | IGNITION AND ELECTRICAL WIRING DIAGRAMS | 5-52 | | |
| | | 6 | LUBRICATION AND COOLING | LUBRICATION SYSTEM | 6-2 |
| | | | | COOLING SYSTEM | 6-9 |

CONTENTS

| | | | |
|---|---------------------|---------------------|----|
| ENGINE MECHANICAL ENGINE RECONDITIONING | 7-2 7-31 | POWERHEAD | 7 |
| LOWER UNIT LOWER UNIT OVERHAUL JET DRIVE | 8-2 8-10 8-68 | LOWER UNIT | 8 |
| MANUAL TILT GAS ASSISTED TILT POWER TRIM AND TILT | 9-2 9-2 9-4 | TRIM AND TILT | 9 |
| REMOTE CONTROL BOX TILLER HANDLE | 10-2 10-11 | REMOTE CONTROL | 10 |
| HAND REWIND STARTER | 11-2 | HAND REWIND STARTER | 11 |
| GLOSSARY | 11-13 | GLOSSARY | |
| MASTER INDEX | 11-17 | MASTER INDEX | |
| SUPPLEMENT—BF2D, BF75A AND BF90A | 12-1 | SUPPLEMENT | 12 |

■ Throughout this manual you will find references to Honda models with the suffix "A" (BF#A). Procedures for later motors with a model suffix "D" (BF#D) are the same, unless noted or unless listed in the Supplement. For instance, most procedures on the BF2A apply to the BF2D, unless otherwise noted, but when working on a BF2D be sure to check the Supplement before starting a procedure. This Supplement also contains late production specifications for the BF75A/BF90A motors.

AIR CLEANER 3-13
ALTERNATOR (STATOR) 5-38
 REMOVING & INSTALLATION 5-39
 TESTING 5-38
AVOIDING THE MOST COMMON MISTAKES 1-3
AVOIDING TROUBLE 1-2
BASIC ELECTRICAL THEORY 5-2
 HOW DOES ELECTRICITY WORK: THE WATER ANALOGY 5-2
 OHM'S LAW 5-2
BATTERY (BOAT MAINTENANCE) 3-23
 BATTERY AND CHARGING SAFETY PRECAUTIONS 3-24
 BATTERY CHARGERS 3-25
 BATTERY TERMINALS 3-24
 CHECKING SPECIFIC GRAVITY 3-23
 CLEANING 3-23
 REPLACING BATTERY CABLES 3-25
BATTERY (CHARGING CIRCUIT) 5-40
 BATTERY & CHARGING SAFETY PRECAUTIONS 5-42
 BATTERY CABLES 5-43
 BATTERY CHARGERS 5-43
 BATTERY CONSTRUCTION 5-40
 BATTERY LOCATION 5-41
 BATTERY RATINGS 5-40
 BATTERY SERVICE 5-41
 BATTERY STORAGE 5-43
 BATTERY TERMINALS 5-42
 MARINE BATTERIES 5-40
BOAT MAINTENANCE 3-21
BOATING SAFETY 1-3
BOLTS, NUTS AND OTHER THREADED RETAINERS 2-12
BREAKER POINTS 5-9
 GAP CHECK 5-9
 REMOVAL & INSTALLATION 5-9
**BREAKER POINTS IGNITION (MAGNETO
IGNITION) 5-7**
BREAKER POINTS IGNITION OVERHAUL 5-11
 ASSEMBLY 5-12
 CLEANING & INSPECTION 5-11
 DISASSEMBLY 5-11
BUY OR REBUILD? 7-32
CAMSHAFT, BEARINGS AND LIFTERS 7-25
 REMOVAL & INSTALLATION 7-25
CAN YOU DO IT? 1-2
CAPACITIES 3-11
CAPACITOR DISCHARGE IGNITION (CDI) SYSTEM 5-12
CARBURETION 4-4
CARBURETOR FLOAT HEIGHTS 4-13
CARBURETOR IDENTIFICATION 4-4
CARBURETOR PILOT SCREW SPECIFICATIONS 4-13
CARBURETORS 4-6
 ASSEMBLY 4-11
 CLEANING & INSPECTION 4-11
 DESCRIPTION AND OPERATION 4-6
 DISASSEMBLY 4-9
 REMOVAL & INSTALLATION 4-8
CDI TEST CHARTS 5-26
CDI UNIT 5-25
 DESCRIPTION & OPERATION 5-25
 REMOVAL & INSTALLATION 5-30
 TESTING 5-26
CHARGE COIL (BREAKER POINTS IGNITION) 5-10
 DESCRIPTION & OPERATION 5-10
 REMOVAL & INSTALLATION 5-10
 TESTING 5-10
CHARGE COIL (CAPACITOR DISCHARGE IGNITION SYSTEM) 5-18
 DESCRIPTION & OPERATION 5-18
 REMOVAL & INSTALLATION 5-19
 TESTING 5-18
CHARGING CIRCUIT 5-35
CHEMICALS 2-3
 CLEANERS 2-4

MASTER INDEX

11-18 MASTER INDEX

- LUBRICANTS & PENETRANTS 2-3
- SEALANTS 2-3
- CHOKE SWITCH 10-7
 - REMOVAL & INSTALLATION 10-7
 - TESTING 10-7
- COMBUSTION 4-3
 - ABNORMAL COMBUSTION 4-3
 - FACTORS AFFECTING COMBUSTION 4-3
- COMPONENT LOCATIONS (IGNITION & ELECTRICAL) 5-48**
- COMPRESSION CHECK 3-26
 - CHECKING COMPRESSION 3-26
 - LOW COMPRESSION 3-26
- CONDENSER 5-10
 - DESCRIPTION & OPERATION 5-10
 - REMOVAL & INSTALLATION 5-10
 - TESTING 5-10
- CONVERSION FACTORS 2-14
- COOLING SYSTEM 6-9**
- COURTESY MARINE EXAMINATIONS 1-11
- CYLINDER HEAD (ENGINE MECHANICAL) 7-11
 - REMOVAL & INSTALLATION 7-11
- CYLINDER HEAD (ENGINE RECONDITIONING) 7-34
 - ASSEMBLY 7-38
 - DISASSEMBLY 7-34
 - INSPECTION 7-35
 - REFINISHING & REPAIRING 7-37
- DESCRIPTION AND OPERATION (CAPACITOR DISCHARGE IGNITION SYSTEM) 5-12
 - FOUR-CYLINDER CARBURETED IGNITION 5-13
 - FOUR-CYLINDER EFI IGNITION 5-13
 - SINGLE-CYLINDER IGNITION 5-12
 - TWO & THREE-CYLINDER IGNITION 5-13
- DESCRIPTION AND OPERATION (CHARGING CIRCUIT) 5-35
- DESCRIPTION AND OPERATION (COOLING SYSTEM) 6-9
 - OVERHEAT WARNING SYSTEM 6-9
 - THERMOSTAT & PRESSURE RELIEF 6-9
 - WATER PUMP 6-9
- DESCRIPTION AND OPERATION (ELECTRONIC IGNITION) 5-34
- DESCRIPTION AND OPERATION (GAS ASSISTED TILT) 9-2
- DESCRIPTION AND OPERATION (HAND REWIND STARTER) 11-2
- DESCRIPTION AND OPERATION (JET DRIVE) 8-68
- DESCRIPTION AND OPERATION (LUBRICATION SYSTEM) 6-2
 - FORCED LUBRICATION 6-2
 - SPLASH LUBRICATION 6-2
- DESCRIPTION AND OPERATION (MANUAL TILT) 9-2
 - SERVICING 9-2
- DESCRIPTION AND OPERATION (POWER TRIM AND TILT) 9-4
- DESCRIPTION AND OPERATION (REMOTE CONTROL BOX) 10-2
- DESCRIPTION AND OPERATION (STARTING CIRCUIT) 5-43
- DESCRIPTION AND OPERATION (TILLER HANDLE) 10-11
- DETERMINING ENGINE CONDITION 7-31
 - COMPRESSION TEST 7-31
 - OIL PRESSURE TEST 7-32
- DIAGNOSTIC TROUBLE CODE CHART 4-23
- DIAGNOSTIC TROUBLE CODES 4-22
 - CLEARING 4-24
 - READING 4-23
 - SERVICE PRECAUTIONS 4-22
- DIRECTIONS AND LOCATIONS 1-2
- DO'S 1-11
- DON'TS 1-11
- DRAINING THE FUEL SYSTEM 4-4
- ELECTRICAL COMPONENTS 5-2
 - CONNECTORS 5-4
 - GROUND 5-3
 - LOAD 5-3
 - POWER SOURCE 5-2
 - PROTECTIVE DEVICES 5-3
 - SWITCHES & RELAYS 5-3
 - WIRING & HARNESSSES 5-4
- ELECTRICAL SYSTEM PRECAUTIONS 5-7
- ELECTRONIC IGNITION 5-34**
- ENGINE BLOCK 7-39
 - ASSEMBLY 7-42
 - DISASSEMBLY 7-39
 - GENERAL INFORMATION 7-39
 - INSPECTION 7-40
 - REFINISHING 7-42
- ENGINE COOLANT TEMPERATURE (ECT) 4-27
 - DESCRIPTION & INSTALLATION 4-27
 - REMOVAL & INSTALLATION 4-27
 - TESTING 4-27
- ENGINE COVER 3-7
 - REMOVAL & INSTALLATION 3-7
- ENGINE MAINTENANCE 3-2**
- ENGINE MECHANICAL 7-2**
- ENGINE OIL 3-7
 - ENGINE OIL RECOMMENDATIONS 3-8
 - OIL & FILTER CHANGE 3-10
 - OIL LEVEL CHECK 3-8
- ENGINE OVERHAUL TIPS 7-32
 - CLEANING 7-33
 - OVERHAUL TIPS 7-32
 - REPAIRING DAMAGED THREADS 7-33
 - TOOLS 7-32
- ENGINE PREPARATION 7-34
- ENGINE REBUILDING SPECIFICATIONS 7-46
- ENGINE RECONDITIONING 7-31**
- ENGINE START-UP AND BREAK-IN 7-45
 - BREAKING IT IN 7-45
 - KEEP IT MAINTAINED 7-45
 - STARTING THE ENGINE 7-45
- ENGINE STOP SWITCH (REMOTE CONTROL SWITCH) 10-7
 - REMOVAL & INSTALLATION 10-8
 - TESTING 10-7
- ENGINE STOP SWITCH (TILLER HANDLE) 10-20
 - REMOVAL & INSTALLATION 10-20
 - TESTING 10-20
- EQUIPMENT NOT REQUIRED BUT RECOMMENDED 1-10
 - ANCHORS 1-10
 - BAILING DEVICES 1-10
 - FIRST AID KIT 1-10
 - SECOND MEANS OF PROPULSION 1-10
 - TOOLS AND SPARE PARTS 1-10
 - VHF-FM RADIO 1-10
- FASTENERS, MEASUREMENTS AND CONVERSIONS 2-12**
- FIBERGLASS HULLS 3-21
- FLYWHEEL 7-29
 - REMOVAL & INSTALLATION 7-29
- FUEL 4-2
 - ALCOHOL-BLENDED FUELS 4-3
 - HIGH ALTITUDE OPERATION 4-3
 - OCTANE RATING 4-2
 - RECOMMENDATIONS 4-2
 - THE BOTTOM LINE WITH FUELS 4-3
 - VAPOR PRESSURE AND ADDITIVES 4-2
- FUEL FILTER 3-13
 - RELIEVING FUEL SYSTEM PRESSURE 3-14
 - REMOVAL & INSTALLATION 3-14
- FUEL INJECTION 4-19**
- FUEL INJECTION BASICS 4-19
- FUEL INJECTORS 4-28
 - DESCRIPTION & OPERATION 4-28
 - REMOVAL & INSTALLATION 4-28
 - TESTING 4-28

- FUEL LINES (CARBURETION) 4-15
 - GENERAL INFORMATION 4-15
 - REPLACEMENT & ROUTING 4-15
- FUEL LINES (FUEL INJECTION) 4-32
 - COMMON PROBLEMS 4-34
 - GENERAL INFORMATION 4-32
 - REPLACEMENT & ROUTING 4-33
- FUEL PRESSURE REGULATOR 4-32
 - DESCRIPTION & OPERATION 4-32
 - INSPECTION 4-32
 - REMOVAL & INSTALLATION 4-32
- FUEL PUMP (CARBURETION) 4-14
 - ASSEMBLY 4-15
 - CLEANING & INSPECTION 4-15
 - DESCRIPTION & OPERATION 4-14
 - DISASSEMBLY 4-14
 - FUEL PRESSURE CHECK 4-14
 - REMOVAL & INSTALLATION 4-14
- FUEL PUMP (FUEL INJECTION) 4-31
 - DESCRIPTION & OPERATION 4-31
 - FUEL PRESSURE CHECK 4-31
 - OVERHAUL 4-32
 - REMOVAL & INSTALLATION 4-31
- FUEL SYSTEM BASICS 4-2**
- FUEL SYSTEM SERVICE 4-3
- FUEL/WATER SEPARATOR 3-15
- GAS ASSIST DAMPER 9-3
 - OVERHAUL 9-4
 - REMOVAL & INSTALLATION 9-3
 - TESTING 9-3
- GAS ASSISTED TILT 9-2**
- GENERAL ENGINE SPECIFICATIONS 3-3
- GENERAL INFORMATION (LOWER UNIT) 8-2
- HAND REWIND STARTER 11-2**
- BF2A AND BF20 11-2
 - ASSEMBLY 11-3
 - CLEANING & INSPECTION 11-3
 - DISASSEMBLY 11-3
 - REMOVAL & INSTALLATION 11-2
- BF5A AND BF50 11-4
 - ASSEMBLY 11-5
 - CLEANING & INSPECTION 11-4
 - DISASSEMBLY 11-4
 - REMOVAL & INSTALLATION 11-4
- BF9.9A AND BF15A 11-7
 - ADJUSTMENT 11-7
 - ASSEMBLY 11-9
 - CLEANING & INSPECTION 11-9
 - DISASSEMBLY 11-7
 - REMOVAL & INSTALLATION 11-7
- BF25A AND BF30A 11-9
 - ADJUSTMENT 11-10
 - ASSEMBLY 11-11
 - CLEANING & INSPECTION 11-10
 - DISASSEMBLY 11-10
 - REMOVAL & INSTALLATION 11-9
- BF75, BF100 AND BF8A 11-5
 - ASSEMBLY 11-7
 - CLEANING & INSPECTION 11-6
 - DISASSEMBLY 11-6
 - REMOVAL & INSTALLATION 11-5
- HAND TOOLS 2-4
 - ELECTRONIC TOOLS 2-9
 - GAUGES 2-9
 - HAMMERS 2-8
 - OTHER COMMON TOOLS 2-8
 - PLIERS 2-7
 - SCREWDRIVERS 2-8
- SOCKET SETS 2-4
- SPECIAL TOOLS 2-8
- WRENCHES 2-6
- HOW TO USE THIS MANUAL 1-2**
- HYDRAULIC UNIT 9-10
 - ASSEMBLY 9-15
 - BLEEDING THE SYSTEM 9-10
 - CHECKING FLUID LEVEL 9-10
 - CLEANING & INSPECTION 9-15
 - DISASSEMBLY 9-14
 - REMOVAL & INSTALLATION 9-11
 - TESTING 9-10
- IGNITION AND ELECTRICAL WIRING DIAGRAMS 5-52**
- IGNITION COIL (BREAKER POINTS IGNITION) 5-11
 - DESCRIPTION & OPERATION 5-11
 - REMOVAL & INSTALLATION 5-11
 - TESTING 5-11
- IGNITION COILS (CAPACITOR DISCHARGE IGNITION SYSTEM) 5-20
 - DESCRIPTION & OPERATION 5-20
 - REMOVAL & INSTALLATION 5-22
 - TESTING 5-20
- IGNITION SWITCH 10-8
 - REMOVAL & INSTALLATION 10-8
 - TESTING 10-8
- IGNITION SYSTEM 3-36
- INDICATOR LIGHT (TILLER HANDLE) 10-20
 - REMOVAL & INSTALLATION 10-20
 - TESTING 10-20
- INDICATOR LIGHTS (REMOTE CONTROL BOX) 10-8
 - REMOVAL & INSTALLATION 10-8
 - TESTING 10-8
- INSIDE THE BOAT 3-21
- INTAKE AIR TEMPERATURE SENSOR (IAT) 4-27
 - DESCRIPTION & OPERATION 4-27
 - REMOVAL & INSTALLATION 4-27
 - TESTING 4-27
- INTAKE MANIFOLD 7-9
 - REMOVAL & INSTALLATION 7-9
- INTRODUCTION (TUNE-UP) 3-25
- JET DRIVE 8-68**
- JET DRIVE ASSEMBLY 8-69
 - ADJUSTMENT 8-72
 - ASSEMBLING 8-75
 - CLEANING & INSPECTING 8-74
 - DISASSEMBLY 8-74
 - REMOVAL & INSTALLATION 8-69
- LIGHTING COIL 5-20
 - DESCRIPTION & OPERATION 5-20
 - REMOVAL & INSTALLATION 5-20
 - TESTING 5-20
- LOWER UNIT 8-2**
- LOWER UNIT (ENGINE MAINTENANCE) 3-12
 - DRAINING AND FILLING 3-12
- LOWER UNIT OVERHAUL 8-10**
- LOWER UNIT—NO REVERSE GEAR 8-5
 - ASSEMBLY 8-11
 - CLEANING & INSPECTION 8-10
 - DISASSEMBLY 8-10
 - REMOVAL & INSTALLATION 8-5
- LOWER UNIT—WITH REVERSE GEAR 8-8
 - ASSEMBLY 8-33
 - CLEANING & INSPECTING 8-29
 - DISASSEMBLY 8-12
 - REMOVAL & INSTALLATION 8-8
 - SHIMMING PROCEDURE 8-50
- LUBRICATION SYSTEM 6-2**
- MAINTENANCE INTERVALS 3-6

11-20 MASTER INDEX

- MAINTENANCE OR REPAIR? 1-2
- MANUAL TILT 9-2**
- MEASURING TOOLS 2-10
 - DEPTH GAUGES 2-12
 - DIAL INDICATORS 2-11
 - MICROMETERS & CALIPERS 2-11
 - TELESCOPING GAUGES 2-12
- METRIC BOLTS 2-15
- MODEL IDENTIFICATION AND SERIAL NUMBERS 8-68
- OIL PAN 7-16
 - REMOVAL & INSTALLATION 7-16
- OIL PRESSURE SWITCH 6-6
 - REMOVAL & INSTALLATION 6-7
 - TESTING 6-6
- OIL PRESSURE WARNING LAMP 6-7
 - REMOVAL & INSTALLATION 6-7
 - TESTING 6-7
- OIL PUMP 6-3
 - OVERHAUL 6-4
 - REMOVAL & INSTALLATION 6-3
- OVERHEAT SENSOR 4-28
 - DESCRIPTION & OPERATION 4-28
 - REMOVAL & INSTALLATION 4-28
 - TESTING 4-28
- OVERHEAT THERMOSWITCH 6-16
 - REMOVAL & INSTALLATION 6-16
 - TESTING 6-16
- OVERHEAT WARNING LAMP 6-15
 - REMOVAL & INSTALLATION 6-16
 - TESTING 6-15
- POWER TRIM AND TILT 9-4**
- PRIMARY COIL 5-11
 - DESCRIPTION & OPERATION 5-11
 - REMOVAL & INSTALLATION 5-11
 - TESTING 5-11
- PROFESSIONAL HELP 1-2
- PROPELLER (ENGINE MAINTENANCE) 3-19
- PROPELLER (LOWER UNIT) 8-4
 - REMOVAL & INSTALLATION 8-4
- PULSAR COIL 5-16
 - DESCRIPTION & OPERATION 5-16
 - REMOVAL & INSTALLATION 5-17
 - TESTING 5-16
- PURCHASING PARTS 1-3
- RECTIFIER 5-31
 - REMOVAL & INSTALLATION 5-32
 - TESTING 5-31
- REGULATIONS FOR YOUR BOAT 1-3
 - CAPACITY INFORMATION 1-4
 - CERTIFICATE OF COMPLIANCE 1-4
 - DOCUMENTING OF VESSELS 1-4
 - HULL IDENTIFICATION NUMBER 1-4
 - LENGTH OF BOATS 1-4
 - NUMBERING OF VESSELS 1-4
 - REGISTRATION OF BOATS 1-4
 - SALES AND TRANSFERS 1-4
 - VENTILATION 1-4
 - VENTILATION SYSTEMS 1-5
- REGULATOR (CAPACITOR DISCHARGE IGNITION SYSTEM) 5-33
 - DESCRIPTION & OPERATION 5-33
 - REMOVAL & INSTALLATION 5-33
 - TESTING 5-33
- REGULATOR/RECTIFIER (CAPACITOR DISCHARGE IGNITION SYSTEM) 5-33
 - REMOVAL & INSTALLATION 5-34
 - TESTING 5-33
- REMOTE CONTROL BOX 10-2**
- REMOTE CONTROL BOX ASSEMBLY 10-2
 - EXPLODED VIEWS 10-3
 - REMOVAL & INSTALLATION 10-2
- REQUIRED SAFETY EQUIPMENT 1-5
 - FIRE EXTINGUISHERS 1-5
 - PERSONAL FLOTATION DEVICES 1-6
 - SOUND PRODUCING DEVICES 1-8
 - TYPES OF FIRES 1-5
 - VISUAL DISTRESS SIGNALS 1-8
 - WARNING SYSTEM 1-6
- ROCKER ARM/SHAFTS 7-5
 - REMOVAL & INSTALLATION 7-5
- SAE BOLTS 2-16
- SAFETY IN SERVICE 1-11**
- SAFETY SWITCH 10-9
 - REMOVAL & INSTALLATION 10-9
 - TESTING 10-9
- SAFETY TOOLS 2-2
 - EYE AND EAR PROTECTION 2-2
 - WORK CLOTHES 2-3
 - WORK GLOVES 2-2
- SELF DIAGNOSIS 5-34
- SERIAL NUMBER IDENTIFICATION 3-2
- SHIFTING PRINCIPLES 8-2
 - COUNTERROTATING UNIT 8-3
 - STANDARD ROTATING UNIT 8-2
- SINGLE PHASE CHARGING SYSTEM 5-36
 - DESCRIPTION AND OPERATION 5-36
- SPARK PLUG WIRES 3-30
 - CHECKING RESISTANCE 3-30
 - REMOVAL & INSTALLATION 3-30
 - TESTING 3-30
- SPARK PLUGS 3-27
 - INSPECTION & GAPPING 3-28
 - READING SPARK PLUGS 3-28
 - REMOVAL & INSTALLATION 3-27
 - SPARK PLUG HEAT RANGE 3-27
 - SPARK PLUG SERVICE 3-27
- SPECIFICATIONS CHARTS**
- CAPACITIES 3-11
- CARBURETOR FLOAT HEIGHTS 4-13
- CARBURETOR PILOT SCREW SPECIFICATIONS 4-13
- CDI TEST CHARTS 5-26
- CONVERSION FACTORS 2-14
- DIAGNOSTIC TROUBLE CODE CHART 4-23
- ENGINE REBUILDING SPECIFICATIONS 7-46
- GENERAL ENGINE SPECIFICATIONS 3-3
- MAINTENANCE INTERVALS 3-6
- METRIC BOLTS 2-15
- SAE BOLTS 2-16
- TUNEUP SPECIFICATIONS 3-26
- USING A VACUUM GAUGE 2-10
- VOLTAGE REGULATOR RECTIFIER 5-32
- SPRING COMMISSIONING CHECKLIST 3-38**
- STANDARD AND METRIC MEASUREMENTS 2-13
- STARTER BUTTON 10-20
 - REMOVAL & INSTALLATION 10-20
 - TESTING 10-20
- STARTER MOTOR 5-44
 - DESCRIPTION & OPERATION 5-44
 - REMOVAL & INSTALLATION 5-45
 - TESTING 5-44
- STARTER MOTOR SOLENOID SWITCH 5-46
 - DESCRIPTION AND OPERATION 5-46
 - REMOVAL & INSTALLATION 5-47
 - TESTING 5-46
- STARTING CIRCUIT 5-43**

- SYSTEM TESTING (BREAKER POINTS IGNITION) 5-8
 - SPARK CHECK 5-8
- SYSTEM TESTING (CAPACITOR DISCHARGE IGNITION SYSTEM) 5-16
 - PROCEDURE 5-16
- TEST EQUIPMENT 5-4
 - JUMPER WIRES 5-4
 - MULTIMETERS 5-5
 - TEST LIGHTS 5-5
- TESTING 5-6
 - OPEN CIRCUITS 5-7
 - RESISTANCE 5-6
 - SHORT CIRCUITS 5-7
 - VOLTAGE 5-6
 - VOLTAGE DROP 5-6
- THE FOUR-STROKE CYCLE 7-3
 - COMPRESSION STROKE 7-3
 - EXHAUST STROKE 7-3
 - INTAKE STROKE 7-3
 - POWER STROKE 7-3
- THREE-PHASE CHARGING SYSTEM 5-36
 - DESCRIPTION AND OPERATION 5-36
 - PRECAUTIONS 5-37
 - SERVICING 5-37
 - TROUBLESHOOTING 5-37
- THROTTLE CABLE 10-14
 - ADJUSTMENT 10-17
 - REMOVAL & INSTALLATION 10-14
- THROTTLE POSITION SENSOR (TPS) 4-26
 - DESCRIPTION & OPERATION 4-26
 - REMOVAL & INSTALLATION 4-26
 - TESTING 4-26
- THROTTLE SWITCH 10-9
 - REMOVAL & INSTALLATION 10-9
 - TESTING 10-9
- TILLER HANDLE 10-11**
- TILLER HANDLE 10-12
 - REMOVAL & INSTALLATION 10-12
- TIMING AND SYNCHRONIZATION 3-36
 - CARBURETOR SYNCHRONIZATION 3-37
 - IDLE SPEED ADJUSTMENT 3-37
 - PREPARATION 3-36
 - SYNCHRONIZATION 3-36
 - TIMING 3-36
- TIMING BELT (ENGINE MAINTENANCE) 3-15
 - ADJUSTMENT 3-16
 - INSPECTION 3-15
- TIMING BELT (ENGINE MECHANICAL) 7-19
 - ADJUSTMENT 7-22
 - INSPECTION 7-19
 - REMOVAL & INSTALLATION 7-20
- TIMING BELT COVER 7-19
 - REMOVAL & INSTALLATION 7-19
- TOOLS 2-4**
- TOOLS AND EQUIPMENT 2-2**
- TORQUE (FASTENERS, MEASUREMENTS AND CONVERSIONS) 2-13
- TRIM ANGLE SENSOR 9-16
 - REMOVAL & INSTALLATION 9-16
 - TESTING 9-16
- TRIM TABS, ANODES AND LEAD WIRES 3-22
- TRIM, TILT & PIVOT POINTS 3-19
 - INSPECTION AND LUBRICATION 3-19
- TRIM/TILT MOTOR 9-8
 - ASSEMBLY 9-10
 - CLEANING & INSPECTION 9-9
 - DISASSEMBLY 9-8
 - REMOVAL & INSTALLATION 9-8
 - TESTING 9-8
- TRIM/TILT SWITCH (POWER TRIM AND TILT) 9-16
- TRIM/TILT SWITCH (REMOTE CONTROL BOX) 10-9
 - REMOVAL & INSTALLATION 10-10
 - TESTING 10-9
- TRIM/TILT SWITCH (TILLER HANDLE) 10-20
 - REMOVAL & INSTALLATION 10-20
 - TESTING 10-20
- TROUBLESHOOTING (TILLER HANDLE) 10-11
- TROUBLESHOOTING ELECTRICAL SYSTEMS 5-6
- TROUBLESHOOTING THE CARBURETED FUEL SYSTEM 4-4
 - COMMON PROBLEMS 4-5
 - COMMON SYMPTOMS 4-5
 - LOGICAL TROUBLESHOOTING 4-4
- TROUBLESHOOTING THE CHARGING SYSTEM 5-38
- TROUBLESHOOTING THE COOLING SYSTEM 6-10
- TROUBLESHOOTING THE FUEL INJECTION SYSTEM 4-20
 - COMMON PROBLEMS 4-22
 - DIAGNOSIS BY SYMPTOM 4-21
 - LOGICAL TROUBLESHOOTING 4-20
 - PRELIMINARY INSPECTION 4-20
- TROUBLESHOOTING THE HAND REWIND STARTER 11-2
- TROUBLESHOOTING THE LOWER UNIT 8-4
- TROUBLESHOOTING THE LUBRICATION SYSTEM 6-2
- TROUBLESHOOTING THE STARTING SYSTEM 5-44
- TUNE-UP 3-25**
- TUNE-UP SEQUENCE 3-25
- TUNEUP SPECIFICATIONS 3-26
- UNDERSTANDING AND TROUBLESHOOTING ELECTRICAL SYSTEMS 5-2**
- USING A VACUUM GAUGE 2-10
- VALVE (ROCKER) COVER 7-3
 - REMOVAL & INSTALLATION 7-3
- VALVE CLEARANCE 3-30
 - ADJUSTMENT 3-30
- VAPOR SEPARATOR 4-29
 - CLEANING & INSPECTION 4-30
 - DESCRIPTION & OPERATION 4-29
 - REMOVAL & INSTALLATION 4-30
- VOLTAGE REGULATOR RECTIFIER 5-32
- WARNING BUZZER (COOLING SYSTEM) 6-16
 - REMOVAL & INSTALLATION 6-16
 - TESTING 6-16
- WARNING BUZZER (LUBRICATION SYSTEM) 6-8
 - REMOVAL & INSTALLATION 6-8
 - TESTING 6-8
- WARNING BUZZER (REMOTE CONTROL BOX) 10-10
 - REMOVAL & INSTALLATION 10-10
 - TESTING 10-10
- WATER PUMP 6-10
 - REMOVAL & INSTALLATION 6-10
- WHERE TO BEGIN 1-2
- WINTER STORAGE CHECKLIST 3-38**
- WIRE AND CONNECTOR REPAIR 5-7