ENGINE MECHANICAL 3-2 ENGINE 3-4 REMOVAL & INSTALLATION 3-4 ROCKER ARM (VALVE) COVER 3-8 REMOVAL & INSTALLATION 3-8 ROCKER ARMS/ROLLER FOLLOWERS 3-10 REMOVAL & INSTALLATION 3-10 THERMOSTAT 3-10 REMOVAL & INSTALLATION 3-10 **INTAKE MANIFOLD 3-11** REMOVAL & INSTALLATION 3-11 EXHAUST MANIFOLD 3-16 REMOVAL & INSTALLATION 3-16 RADIATOR 3-18 REMOVAL & INSTALLATION 3-18 ENGINE FAN 3-20 REMOVAL & INSTALLATION 3-20 WATER PUMP 3-21 **REMOVAL & INSTALLATION 3-21** CYLINDER HEAD 3-24 REMOVAL & INSTALLATION 3-24 OIL PAN 3-29 REMOVAL & INSTALLATION 3-29 OIL PUMP 3-31 REMOVAL & INSTALLATION 3-31 CRANKSHAFT DAMPER 3-32 REMOVAL & INSTALLATION 3-32 TIMING CHAIN COVER 3-34 REMOVAL & INSTALLATION 3-34 REMOVAL & INSTALLATION 3-35 TIMING CHAIN AND GEARS 3-35 REMOVAL & INSTALLATION 3-35 CAMSHAFT, BEARINGS AND LIFTERS 3-38 REMOVAL & INSTALLATION 3-38 INSPECTION 3-39 BALANCE SHAFT 3-40 REMOVAL & INSTALLATION 3-40 REAR MAIN SEAL 3-40 REMOVAL & INSTALLATION 3-40 FLYWHEEL/FLEXPLATE 3-41 REMOVAL & INSTALLATION 3-41 EXHAUST SYSTEM 3-42 INSPECTION 3-42 REPLACEMENT 3-42 ENGINE RECONDITIONING 3-43 DETERMINING ENGINE CONDITION 3-43

COMPRESSION TEST 3-43

BUY OR REBUILD? 3-44 ENGINE OVERHAUL TIPS 3-44

TOOLS 3-44
OVERHAUL TIPS 3-44
CLEANING 3-44
REPAIRING DAMAGED
THREADS 3-45
ENGINE PREPARATION 3-46
CYLINDER HEAD 3-46
DISASSEMBLY 3-46
INSPECTION 3-48

REFINISHING & REPAIRING 3-49 ASSEMBLY 3-50 ENGINE BLOCK 3-51 GENERAL INFORMATION 3-51 DISASSEMBLY 3-51 INSPECTION 3-52 REFINISHING 3-53 ASSEMBLY 3-53 ENGINE START-UP AND BREAK-IN 3-56 STARTING THE ENGINE 3-56 BREAKING IT IN 3-56 KEEP IT MAINTAINED 3-56 SPECIFICATIONS CHARTS ENGINE MECHANICAL SPECIFICATIONS 3-2 TORQUE SPECIFICATIONS 3-57

