

CONTENTS

QUICK REFERENCE DATA IX

**CHAPTER ONE
GENERAL INFORMATION** 1

Safety	Test equipment
Notes, cautions and warnings	Precision measuring tools
Service hints	Fasteners
Special tools	Sealants, cements and cleaners
Basic hand tools	Lubricants

**CHAPTER TWO
ENGINE FUNDAMENTALS** 21

Operating principles	Ignition system
Major engine components	Electrical system
Fuel system	

**CHAPTER THREE
GENERAL ENGINE INFORMATION** 42

Fuel	Basic engine specifications
Oil	Purchasing parts
Engine identification	

**CHAPTER FOUR
TROUBLESHOOTING** 49

Fuel	Starter
Controls	Troubleshooting

**CHAPTER FIVE
LUBRICATION AND MAINTENANCE 57**

Lubrication	Ignition breaker points and condenser
Maintenance	Ignition coil armature air gap (models with external ignition coil)
Safety devices	Ignition timing
Oil change	Carburetor adjustment (except Vector VLV50, VLXL50, VLV55 and VLXL55)
Air cleaner	Carburetor adjustment (Vector VLV50, VLXL50, VLV55 and VLXL55)
Cooling system	Governor linkage
Hoses and wires	Combustion chamber
Operating cable	
Muffler	
Compression test	
Spark plug	

**CHAPTER SIX
FUEL AND GOVERNOR SYSTEMS 76**

Operating linkage	Walbro LME carburetor
Diaphragm carburetors	Governor system
Tecumseh float carburetors	

**CHAPTER SEVEN
IGNITION SYSTEM AND FLYWHEEL BRAKE 106**

Ignition coil (breaker-point ignition)	Breaker point cam
Ignition module/coil	Stop switch
Flywheel and key	Flywheel brake

**CHAPTER EIGHT
REWIND STARTERS 115**

Rewind starters mounted on blower housing	Stylized rewind starter
Early "teardrop" shaped starter	Vertical-pull rewind starters
Starter used on HM and VM series engines	

**CHAPTER NINE
ELECTRICAL SYSTEM 135**

Electrical precautions	Electric starter system
Testing	Troubleshooting
Battery	Electric starter motors
Charging/lighting system	

CHAPTER TEN
GENERAL INSPECTION AND REPAIR TECHNIQUES 151

Failure analysis
Precision measurements

Repair techniques

CHAPTER ELEVEN
ENGINE OVERHAUL 160

Muffler
Crankcase breather
Flywheel
Cylinder head
Valve system
Oil seals (service with crankshaft installed)
Internal engine components
Engine disassembly
Piston rings
Piston and piston pin

Connecting rod
Camshaft and tappets
Oil pump
Governor
Crankshaft and main bearings
Cylinder
Oil seals
Balancer shaft
Auxiliary drive shaft
Engine assembly

CHAPTER TWELVE
TECUMSEH TOOLS 213

CHAPTER THIRTEEN
CRAFTSMAN/TECUMSEH MODEL NUMBERS 215

INDEX 222