

2003 Harley-Davidson®

VRSCA

MODEL



SERVICE MANUAL

P/N 99501-03

2003 VRSCA

SERVICE MANUAL

The information in this Service Manual applies
to all 2003 VRSCA models.

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MAINTENANCE

1

CHASSIS

2

ENGINE

3

FUEL SYSTEM

4

ELECTRIC STARTER

5

COOLING SYSTEM

6

TRANSMISSION

7

ELECTRICAL

8

FUEL INJECTION

9

APPENDIX

INDEX

TABLE OF CONTENTS

	Page No.		Page No.
SECTION 1-MAINTENANCE			
1.1 General.....	1-1	1.7 Battery Maintenance	1-15
Servicing a New Motorcycle	1-1	General	1-15
Safe Operating Maintenance.....	1-1	Battery Electrolyte Antidotes (table)	1-15
Shop Practices	1-1	Disconnection/Removal	1-16
Repair Notes	1-1	Installation/Connection.....	1-17
Safety	1-1	Storage	1-17
Removing Parts	1-1	1.8 Brakes.....	1-18
Cleaning.....	1-1	Fluid Inspection.....	1-18
Repair and Replacement Procedures	1-2	Rear Brake Pedal.....	1-19
Hardware and Threaded Parts.....	1-2	Pedal Adjustment	1-19
Instruments and Gauges.....	1-2	1.9 Bleeding Brakes	1-20
Bearings.....	1-2	General	1-20
Bushings	1-2	Bleeding Brakes.....	1-20
Gaskets.....	1-2	1.10 Brake Pads and Discs	1-21
Lip Type Seals	1-2	Inspection.....	1-21
O-Rings (Preformed Packings)	1-2	Brake Pads.....	1-21
Gears	1-2	Brake Disc Thickness.....	1-21
Shafts.....	1-2	Brake Disc Lateral Runout and Warpage.....	1-21
Part Replacement	1-2	Brake Pad Replacement	1-21
Cleaning	1-3	Rear Brake Caliper	1-21
Part Protection	1-3	Front Brake Caliper	1-23
Cleaning Process.....	1-3	1.11 Tires and Wheels	1-24
Rust or Corrosion Removal.....	1-3	Tires	1-24
Tool Safety	1-3	Wheel Bearings.....	1-24
Air Tools.....	1-3	1.12 Clutch	1-25
Wrenches.....	1-3	General	1-25
Pliers/Cutters/Prybars	1-3	Checking Clutch Fluid Level	1-25
Hammers	1-3	1.13 Bleeding Clutch Fluid Line	1-26
Punches/Chisels	1-3	Procedure	1-26
Screwdrivers	1-3	1.14 Rear Belt Deflection	1-28
Ratchets and Handles.....	1-4	Inspection.....	1-28
Sockets	1-4	1.15 Rear Belt and Sprockets	1-30
Storage Units	1-4	General	1-30
1.2 Fuel and Oil	1-5	Cleaning.....	1-30
Fuel	1-5	Inspection.....	1-30
Gasoline Blends	1-5	Sprockets	1-30
Engine Oil.....	1-5	Rear Belt	1-30
Winter Lubrication.....	1-5	Drive Belt Wear Analysis (table).....	1-31
1.3 Maintenance Schedule	1-6	1.16 Suspension Adjustments	1-32
1.4 Airbox and Air Filter	1-9	Rear Shock Preload.....	1-32
Airbox Removal	1-9	1.17 Steering Head Bearings	1-33
Airbox Installation	1-10	Adjustment (Fall-Away).....	1-33
1.5 Cooling System.....	1-12	1.18 Front Fork Oil.....	1-34
Checking Coolant Level in Overflow Bottle	1-12	Replacing Fork Oil	1-34
Check for Coolant in System	1-12	1.19 Spark Plug/Coil	1-36
1.6 Engine Oil and Filter	1-13	General	1-36
Checking and Adding Oil	1-13	Removal/Inspection	1-36
Cold Engine Oil Level Check	1-13	Installation	1-37
Hot Engine Oil Level Check	1-13		
Changing Oil and Filter.....	1-14		

1.20 Cable and Chassis Lubrication	1-38
General	1-38
Cables and Hand Levers	1-38
Jiffy Stand	1-38
1.21 Throttle Cables.....	1-39
Cable Inspection, Lubrication and Adjustment.....	1-39
Inspection and Lubrication	1-39
Adjustment	1-39
Fuel System Lines and Fittings	1-39
1.22 Valve Lash	1-40
Lash Measurement	1-40
Verify Cam Timing	1-44
Lash Adjustment	1-44
1.23 Secondary Cam Chain.....	1-50
General	1-50
Adjustment	1-50
1.24 Headlamp Alignment	1-53
Inspection	1-53
1.25 Critical Fasteners.....	1-54
Inspection	1-54
1.26 Storage	1-55
Preparation for Storage	1-55
Removal from Storage	1-56
1.27 Troubleshooting	1-57
General	1-57
Engine	1-57
Starter Motor Does Not Operate/Turn Over	1-57
Engine Turns Over But Does Not Start	1-57
Starts Hard	1-57
Starts But Runs Irregularly or Misses	1-57
A Spark Plug Fouls Repeatedly	1-58
Pre-Ignition or Detonation (Knocks or Pings)	1-58
Overheating	1-58
Valve Train Noise	1-58
Excessive Vibration	1-58
Check Engine Light Illuminates During Operation.....	1-58
Lubrication System	1-58
Engine Uses Oil or Smokes Excessively.....	1-58
Engine Leaks Oil from Cases, Hoses, Etc.	1-58
Low Oil Pressure	1-59
High Oil Pressure	1-59
Electrical System	1-59
Alternator Does Not Charge	1-59
Alternator Charge Rate Is Below Normal	1-59
Speedometer Operates Erratically	1-59
Transmission.....	1-59
Shifts Hard.....	1-59
Jumps Out of Gear	1-59
Clutch Slips	1-59
Clutch Drags or Does Not Release	1-59
Clutch Chatters.....	1-59
Handling	1-60
Irregularities.....	1-60
Brakes	1-60
Brake Does Not Hold Normally	1-60

SECTION 2-CHASSIS

2.1 Specifications	2-1
2.2 Torque Values.....	2-2
2.3 Vehicle Identification Number	
(V.I.N.)	2-5
General	2-5
2.4 Frame/Lower Frame Rails.....	2-6
General	2-6
Removal	2-7
Installation	2-7
2.5 Front Engine Mount	2-8
Replacement	2-8
2.6 Front Engine Mount Assembly	2-9
Removal	2-9
Disassembly and Assembly.....	2-9
Installation	2-9
2.7 Exhaust System.....	2-11
Removal	2-11
Installation	2-12
2.8 Rear Engine Mounts.....	2-13
Removal	2-13
Installation	2-13
2.9 Engine Replacement	2-14
General	2-14
Removal	2-14
Installation	2-20
2.10 Jiffy Stand	2-23
Cleaning	2-23
Removal	2-24
Installation	2-24
2.11 Footrests/Foot Controls	2-25
Rider Footrests	2-25
Removal.....	2-25
Installation.....	2-25
Passenger Footrests	2-25
Removal.....	2-25
Installation.....	2-25
2.12 Throttle Cables	2-27
Removal/Disassembly	2-27
Cleaning and Inspection	2-27
Assembly and Installation.....	2-28
2.13 Clutch Master Cylinder/Reservoir 2-29	
General	2-29
Removal	2-29
Disassembly	2-30
Assembly	2-31
Installation	2-31

2.14 Clutch Hand Lever	2-32
Installation	2-32
2.15 Clutch Fluid Line.....	2-33
Removal	2-33
Installation	2-33
2.16 Secondary Clutch Actuator.....	2-34
Removal	2-34
Disassembly	2-34
Assembly	2-34
Installation	2-35
2.17 Front Brake Master	
Cylinder/Reservoir	2-36
General	2-36
Removal and Disassembly	2-37
Cleaning and Inspection	2-38
Assembly	2-38
Installation	2-39
2.18 Front Brake Calipers.....	2-40
Removal	2-40
Disassembly	2-41
Cleaning, Inspection and Repair	2-42
Assembly	2-42
Installation	2-43
2.19 Rear Brake Master	
Cylinder/Reservoir	2-45
Removal	2-45
Disassembly	2-47
Cleaning and Inspection	2-48
Assembly	2-48
Installation	2-50
2.20 Rear Brake Caliper	2-51
Removal	2-51
Disassembly	2-51
Cleaning, Inspection and Repair	2-53
Assembly	2-54
Installation	2-55
2.21 Handlebars	2-56
Removal	2-56
Installation	2-57
2.22 Front Wheel	2-58
General	2-58
Preliminary Inspection - Brake Discs	2-58
Preliminary Inspection - Wheel/Tire	2-58
Removal	2-59
Disassembly	2-60
Cleaning and Inspection	2-60
Assembly	2-60
Installation	2-61
2.23 Rear Wheel	2-62
General	2-62
Preliminary Inspection - Brake Disc	2-62

Preliminary Inspection - Wheel/Tire.....	2-62
Removal.....	2-63
Disassembly.....	2-64
Cleaning and Inspection	2-64
Assembly	2-65
Installation.....	2-66
2.24 Sealed Wheel Bearings	2-67
General	2-67
Inspection - Lateral End Play	2-67
Removal.....	2-68
Installation	2-69
2.25 Disc Rim Runout.....	2-70
General	2-70
Lateral Runout	2-70
Radial Runout	2-70
2.26 Tires	2-71
General	2-71
Demounting Tires.....	2-71
Cleaning and Inspection	2-72
Tire Replacement.....	2-72
Mounting Tires	2-73
Tire Runout	2-74
Lateral Runout.....	2-74
Radial Runout.....	2-74
Wheel Balancing.....	2-75
2.27 Front Fender	2-76
Removal.....	2-76
Installation	2-76
2.28 Front Fork.....	2-77
Removal.....	2-77
Disassembly.....	2-77
Cleaning and Inspection	2-78
Assembly	2-80
Installation.....	2-81
2.29 Steering Head	2-82
Removal.....	2-82
Cleaning and Inspection	2-83
Lower Fork Stem Bearing.....	2-83
Steering Head Bearing Race.....	2-83
Assembly	2-84
Installation	2-84
2.30 Fork Lock	2-85
General	2-85
Removal.....	2-85
Installation.....	2-85
2.31 Belt Guard/Debris Deflector	2-86
Removal.....	2-86
Belt Guard	2-86
Debris Deflector.....	2-86
Installation.....	2-86
Belt Guard	2-86
Debris Deflector.....	2-86
2.32 Rear Shock Absorbers.....	2-87

Removal.....	2-87
Installation.....	2-87
2.33 Rear Fork.....	2-89
Removal.....	2-89
Disassembly.....	2-90
Assembly.....	2-90
Installation.....	2-91
2.34 Seat Latch.....	2-92
Replacement.....	2-92
2.35 Seat.....	2-93
Removal.....	2-93
Cleaning and Inspection.....	2-93
Installation.....	2-94
2.36 Rear Fender/Supports.....	2-95
Removal.....	2-95
Installation.....	2-96
Installation.....	2-96

SECTION 3-ENGINE

3.1 Specifications.....	3-1
3.2 Service Wear Limits.....	3-6
General.....	3-6
3.3 Torque Values (table).....	3-7
3.4 Oil Flow.....	3-8
General.....	3-8
3.5 Oil Pressure.....	3-12
Oil Pressure Indicator Lamp.....	3-12
Checking Oil Pressure.....	3-12
3.6 How To Use This Section.....	3-13
Top End Repair.....	3-13
Bottom End Repair.....	3-13
Typical Symptoms.....	3-13
3.7 Troubleshooting.....	3-14
Diagnosing Valve Train Noise.....	3-14
Compression Test.....	3-14
Cylinder Leakage Test.....	3-15
Diagnosing Smoking Engine or High Oil Consumption.....	3-15
Check Prior to Cylinder Head Removal.....	3-15
Check After Cylinder Head Removal.....	3-15
3.8 Stripping Motorcycle For Service ..	3-16
General.....	3-16
Engine Cradle and Stand.....	3-17
3.9 Throttle Body.....	3-18
Removal.....	3-18
Installation.....	3-19
3.10 Top End Disassembly.....	3-20
Cam Drive Removal.....	3-20

3.11 Cylinder Head Service.....	3-26
General.....	3-26
Removal and Disassembly.....	3-26
Procedure for Using the Neway Valve Seat Cutter.....	3-32
Head Assembly.....	3-34
3.12 Oil Pump.....	3-36
Replacement.....	3-36
3.13 Clutch.....	3-38
Removal.....	3-38
Disassembly.....	3-42
Cleaning and Inspection.....	3-43
Assembly.....	3-43
Installation.....	3-47
3.14 Upper and Lower	
Crankcase Service.....	3-50
Disassembly.....	3-50
Shift Drum Removal.....	3-55
Assembly.....	3-57

3.15 Counterbalancer Bearing Replacement.....	3-65
Removal.....	3-65
Installation.....	3-68
3.16 Crankshaft Bearing Replacement.....	3-71
General.....	3-71
Alternator Side.....	3-71
Clutch Side.....	3-72
3.17 Shift Shaft and Seal.....	3-73
General.....	3-73
Removal.....	3-73
Installation.....	3-74

3.18 Crankshaft, Piston and	
Cylinder Liner.....	3-75
General.....	3-75
3.19 Oil Filter Mount.....	3-89
Replacement.....	3-89
3.20 Cam Drive.....	3-90
Assembly.....	3-90
3.21 Cylinder Heads.....	3-93
General.....	3-93
Installation.....	3-93
3.22 Installing and Timing the Cams ...	3-95
Procedure.....	3-95

SECTION 4-FUEL SYSTEM

4.1 Specifications.....	4-1
Torque Values.....	4-1

4.2 Fuel Pump/Filters/Fuel Level Sender

Assembly	4-2
Removal	4-2
Installation	4-4
Suction Side Fuel Filter	4-5
Pressure Side Fuel Filter	4-5
Removal	4-5
Installation	4-5
Fuel Pump	4-6
General	4-6
Removal	4-6
Installation	4-6
Fuel Level Sender	4-6
Removal	4-6
Installation	4-6

4.3 Fuel Tank4-7

Removal	4-7
Cleaning and Inspecting	4-7
Installation	4-8

4.4 Vapor Valve4-9

General	4-9
Replacement	4-9
Resistive Plug	4-9

4.5 Evaporative Emissions Control-CA Models.....4-10

General	4-10
Purge Solenoid	4-11
Removal	4-11
Installation	4-11
Vapor Valve	4-11
Charcoal Canister	4-12
Removal/Inspection	4-12
Installation	4-12
Hose Routing	4-13

SECTION 5-ELECTRIC STARTER**5.1 Specifications.....5-1**

Torque Values	5-1
---------------------	-----

5.2 Electric Starter System.....5-2

General	5-2
Wiring Diagrams	5-2
Starter Relay	5-2
Starter	5-2
Starter Solenoid	5-2
Operation	5-2

5.3 Starter Relay.....5-4

Removal	5-4
Installation	5-5

5.4 Starter5-6

Removal	5-6
Installation	5-6

5.5 Starter Solenoid5-7

General	5-7
Removal	5-7
Installation	5-7

SECTION-6 COOLING SYSTEM**6.1 Specifications6-1**

Torque Values	6-1
Torque Values	6-2

6.2 Coolant Flow6-2

General	6-2
Description	6-2
Troubleshooting	6-4
Low Engine Temperature	6-4
High Engine Temperature	6-4
Coolant Leaks	6-4
Pressure Cap	6-4
Pressure Cap Test	6-5
System Pressure Test	6-6
Leak Detection Dye Test	6-7
Tests for Blown Gasket	6-7

6.3 Engine Coolant6-8

General	6-8
Changing Coolant	6-8

6.4 Thermostat6-10

General	6-10
Removal	6-10
Installation	6-11

6.5 Water Pump.....6-12

Removal	6-12
Installation	6-13

6.6 Coolant Pipes and Hoses6-14

Removal	6-14
Disassembly	6-14
Assembly	6-16
Installation	6-16

6.7 Oil Line Fittings6-17

Removal	6-17
Installation	6-17

6.8 Radiator/Oil Cooler.....6-18

General	6-18
Removal	6-18
Installation	6-20

6.9 Oil Cooler6-21

Removal	6-21
Installation	6-21

SECTION 7-TRANSMISSION**7.1 Specifications7-1**

Torque Values	7-1
---------------------	-----

7.2 Output Shaft	7-2
General	7-2
Disassembly - 2nd Gear End	7-2
Bearing Removal - 2nd Gear End	7-2
Bearing Installation - 2nd Gear End	7-3
Assembly - 2nd Gear End	7-6
Bearing Removal - 1st Gear End	7-7
Bearing Installation - 1st Gear End	7-7
Assembly - 1st Gear End	7-9
7.3 Input Shaft	7-11
Disassembly - 2nd Gear End	7-11
Bearing Removal - 2nd Gear End	7-11
Bearing Installation - 2nd Gear End	7-11
Assembly - 2nd Gear End	7-14
Disassembly - 1st Gear End	7-16
Bearing Removal - 1st Gear End	7-16
Assembly - 1st Gear End	7-16
Bearing Installation - 1st Gear End	7-16

SECTION 8-ELECTRICAL

8.1 Specifications	8-1
Torque Values	8-2
8.2 Bulb Requirements	8-3
General	8-3
8.3 Relay/Fuse Block	8-4
General	8-4
Relay/Fuse Block Removal	8-4
Fuse Replacement	8-4
Relay Replacement	8-4
Relay/Fuse Block Installation	8-5
8.4 Crank Position Sensor: CKP	8-6
General	8-6
Removal	8-6
Installation	8-6
8.5 Maxi-Fuse	8-7
Replacement	8-7
8.6 Ignition/Light Switch	8-8
General	8-8
Replacement	8-8
8.7 Alternator	8-9
General	8-9
Removal	8-9
Installation	8-10
8.8 Voltage Regulator	8-11
General	8-11
Removal	8-11
Installation	8-12
8.9 Battery	8-13
General	8-13
Battery Electrolyte Antidote (table)	8-13
Battery Testing	8-13

Voltmeter Test (table)	8-13
Battery Disconnection And Removal	8-14
Cleaning And Inspection	8-15
Battery Charging	8-15
Safety Precautions	8-15
Charging Battery	8-15
Battery Charging Rates/Times (table)	8-16
Battery Installation And Connection	8-16
Battery Storage	8-17

8.10 Battery Cables	8-18
General	8-18
Negative Cable Replacement	8-18

8.11 Headlamp	8-19
General	8-19
Headlamp Bulb	8-20
Removal	8-20
Installation	8-20
Headlamp Lens\	8-20
Removal	8-20
Installation	8-20

8.12 Tail Lamp	8-21
Removal	8-21
Installation	8-22

8.13 Turn Signals/Running Lights	8-23
Bulb Replacement	8-23
Lamp Replacement	8-23
General	8-23
Front Turn Signals	8-23
Rear Turn Signals	8-24

8.14 Turn Signal Security Module:

TSSM	8-25
General	8-25
Removal	8-25
Installation	8-25

8.15 Instrument Cluster	8-26
General	8-26
Removal	8-26
Installation	8-27

8.16 Vehicle Speed Sensor: VSS	8-28
General	8-28
Removal	8-28
Installation	8-28

8.17 Neutral Switch	8-29
General	8-29
Removal	8-29
Installation	8-29

8.18 Oil Pressure Switch	8-30
General	8-30
Removal	8-30
Installation	8-31

8.19 Stop Light Switch	8-32
General	8-32

	Page No.
Removal	8-32
Installation	8-32
8.20 Horn.....	8-33
Inspection	8-33
Replacement	8-33
8.21 Cooling Fans	8-34
General	8-34
Removal	8-34
Installation	8-35

SECTION 9-FUEL INJECTION

9.1 Specifications.....	9-1
Torque Values	9-2
9.2 Electronic Fuel Injection: EFI.....	9-3
General	9-3
Troubleshooting	9-3
9.3 Electronic Control Module: ECM	9-5
General	9-5
Removal	9-5
Installation	9-5
9.4 Throttle Position Sensor: TP	9-6
General	9-6
Removal	9-6
Installation	9-6
9.5 Intake Air Temperature Sensor: IAT.....	9-7
General	9-7
Removal	9-7
Installation	9-7
9.6 Engine Coolant Temperature Sensor: ECT	9-8
General	9-8
Removal	9-8
Installation	9-8
9.7 Idle Air Control: IAC.....	9-9
General	9-9
Removal	9-9
Installation	9-10
9.8 Manifold Absolute Pressure Sensor: MAP	9-11
General	9-11
Removal	9-11
Installation	9-11
9.9 Fuel Rail/Fuel Injectors.....	9-12
General	9-12
Removal	9-12
Disassembly	9-12
Fuel Injectors	9-12
Fuel Pressure Regulator	9-12
Fuel Tubes	9-12
Assembly	9-13

	Page No.
Fuel Injectors	9-13
Fuel Pressure Regulator	9-13
Fuel Tubes	9-13
Installation	9-13
9.10 Fuel Pressure Test	9-14
General	9-14
Testing	9-14
9.11 Intake Leak Test.....	9-16
General	9-16
Leak Tester	9-16
Parts List	9-16
Tester Assembly	9-16
Intake Leak Testing.....	9-17

APPENDIX A-TOOLS

A.1 Tools	A-1
------------------------	------------

APPENDIX B-WIRING

B.1 Amp Multilock Electrical Connectors.....	B-1
Removing Socket/Pin Terminals.....	B-1
Installing Socket/Pin Terminals.....	B-1
Crimping Instructions	B-4
B.2 Deutsch Electrical Connectors	B-5
General	B-5
Removing/Disassembling.....	B-5
Removing/Installing Sockets.....	B-5
Removing/Installing Pins.....	B-6
Assembling/Installing	B-7
Crimping Instructions	B-8
B.3 Mini-Deutsch Connectors	B-10
General	B-10
Crimping Instructions	B-10
B.4 Sealed Butt Splice Connectors....	B-12
Installation.....	B-12
B.5 Packard Electrical Connectors	B-13
General	B-13
Pull-to-Seat Terminals.....	B-14
Push-to-Seat Terminals	B-14
Crimping Instructions	B-15
B.6 Packard ECM Connector	B-17
Crimping Instructions	B-18
B.7 Connector Locations	B-19
B.8 Index To Wiring Diagrams.....	B-21

APPENDIX C-CONVERSIONS

C.1 Conversions: Linear (table)..... C-1

C.2 Fastener Torque Values (tables)..... C-2

C.3 Fluid Conversions..... C-4

United States System C-4

Metric System C-4

British Imperial System C-4

APPENDIX D-VALVE LASH

D.1 Valve Tappet Shims (table) D-1

D.2 Valve Lash Calculation

Worksheet 1 D-3

D.3 Valve Lash Calculation

Worksheet 2 D-5

INDEX

6. Gently lift the air filter bottom. Front breather hose is a press-fit and will disconnect, rear breather has a worm clamp holding hose to air filter bottom. Loosen clamp and remove air filter bottom.

CAUTION

If airbox is not to be reinstalled immediately, cover throttle body intakes with tape to prevent contaminants/objects from falling down the throttle bores. Do not use shop rags or objects that could damage the throttle body butterflies.

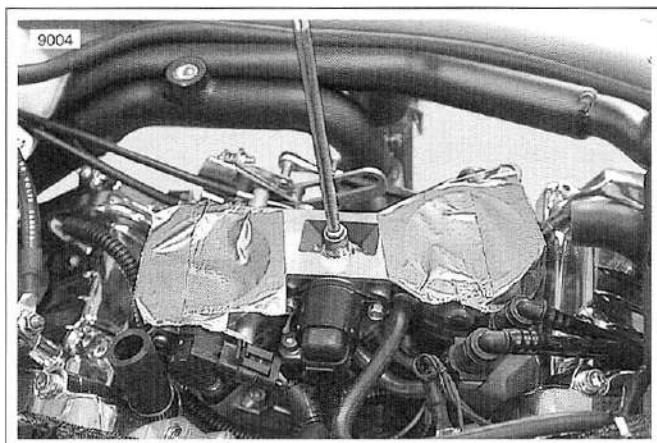


Figure 1-5. Airbox Removed

AIRBOX INSTALLATION

1. Remove tape from throttle body intakes.
2. See Figure 1-6. Inspect and replace bottom airbox gasket if damaged. Check gasket position on air filter bottom. Gasket is located by three alignment pins on mating surface.

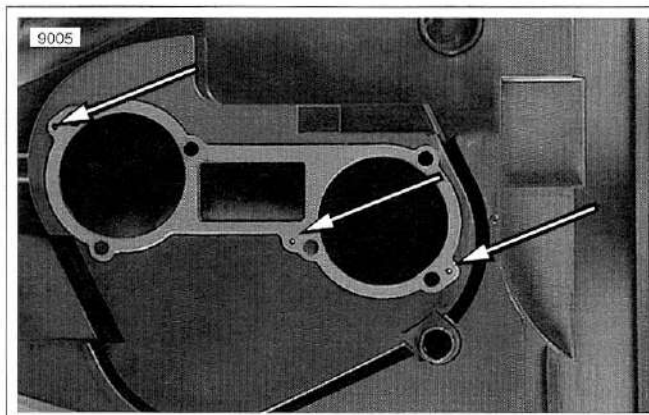


Figure 1-6. Air Filter Gasket Alignment Pins (3)

3. Place air filter bottom over throttle body and attach rear breather hose with hose clamp.
4. Align air filter bottom with front breather hose and press firmly in position.

NOTE

Velocity stacks have a mark at the bottom flange between two of the fastener locations. Align the mark with the corresponding mark on the air filter bottom.

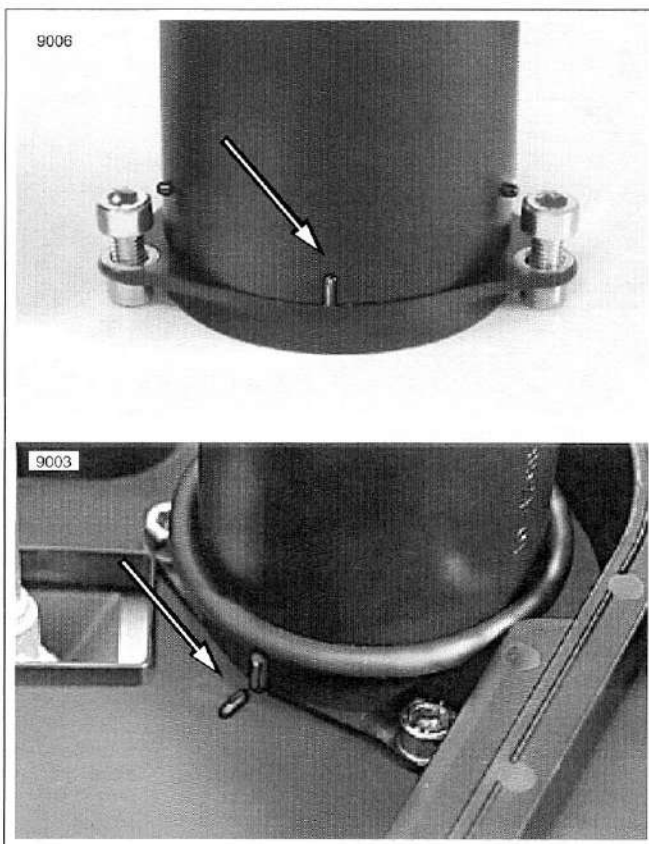


Figure 1-7. Velocity Stack Alignment Marks

GENERAL

The fuel pump is located in the fuel tank. It delivers fuel to the fuel metering assembly. The fuel metering assembly contains the fuel injectors and the pressure regulator, where the system pressure is controlled. Excess fuel pressure is returned to the fuel tank by a return line. The ECM controls the system relay that supplies 12 vdc to the fuel pump.

When the engine is stopped, the pump can be turned on by applying battery voltage to pin 1 and ground to pin 3 of the fuel pump connector [86A] or by using the Scanalyzer.

Improper fuel system pressure may contribute to one of the following conditions:

- Cranks, but won't run.
- Cuts out (may feel like ignition problem).
- Hesitation, loss of power or poor fuel economy.

NOTE

Refer to the VRSCA Electrical Diagnostic Manual for further information on the function and testing of the fuel system.

TESTING

The fuel pressure gauge (0-100 PSI) allows for fuel injector and fuel system pressure diagnosis.

PART NO.	SPECIALTY TOOL
HD-41182	Fuel pressure gauge
26338-68	1/8 in. pipe thread 90° (right angle) elbow

1. See Figure 9-18. Disconnect fuel pump connector [141] from top of fuel tank.
2. Start the engine and allow the vehicle to run.
3. When engine stalls, operate the starter for 3 seconds to remove any remaining fuel from the fuel lines. Turn ignition key off.
4. See Figure 9-19. Insert a 1/8 in. pipe thread 90° degree (right angle) elbow (1) between the fuel valve (2) and the Schrader valve adapter (3).
5. See Figure 9-20. Remove protective cap from Schrader valve in fuel metering assembly.
6. Verify that the fuel valve and air bleed petcock on the FUEL PRESSURE GAUGE (Part No. HD-41182) are closed.

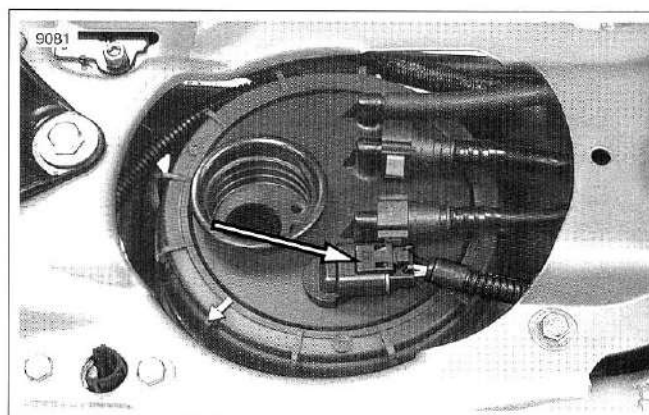


Figure 9-18. Fuel Pump Connector [141]

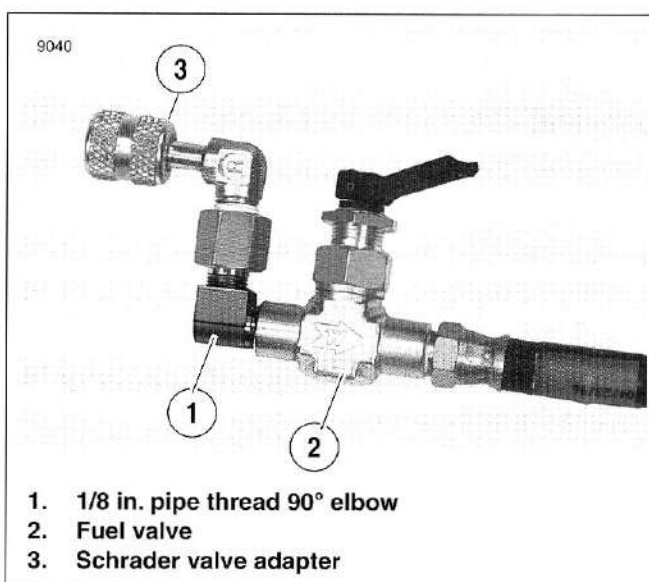


Figure 9-19. Fuel Pressure Gauge Valves

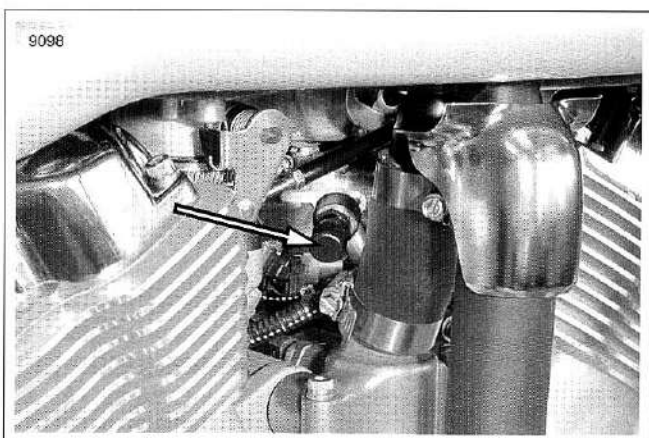


Figure 9-20. Schrader Valve Location

4. Lay the back of the core crimp tails on the appropriate nest. Be sure the core crimp tails are pointing towards the forming jaws.
5. Gently apply pressure to handles of tool until crimpers slightly secure the core crimp tails.
6. Insert stripped wire between crimp tails. Verify that wire is positioned so that short pair of crimp tails squeeze bare wire strands, while long pair folds over insulation or seal material.
7. Squeeze handle of crimp tool until tightly closed. Tool automatically opens when the crimping sequence is complete.
8. Determine the correct dye or nest for the insulation/seal crimp.
9. Lay the back of the insulation/seal crimp tails on the appropriate nest. Be sure the insulation/seal crimp tails are pointing towards the forming jaws.
10. Squeeze handle of crimp tool until tightly closed. Tool automatically opens when the crimping sequence is complete.
11. See Figure B-22. Inspect the quality of the core (3) and insulation/seal (2) crimps. Distortion should be minimal.

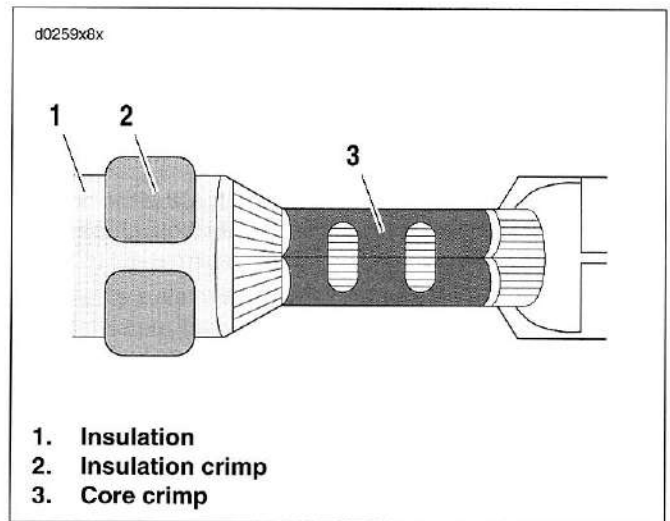
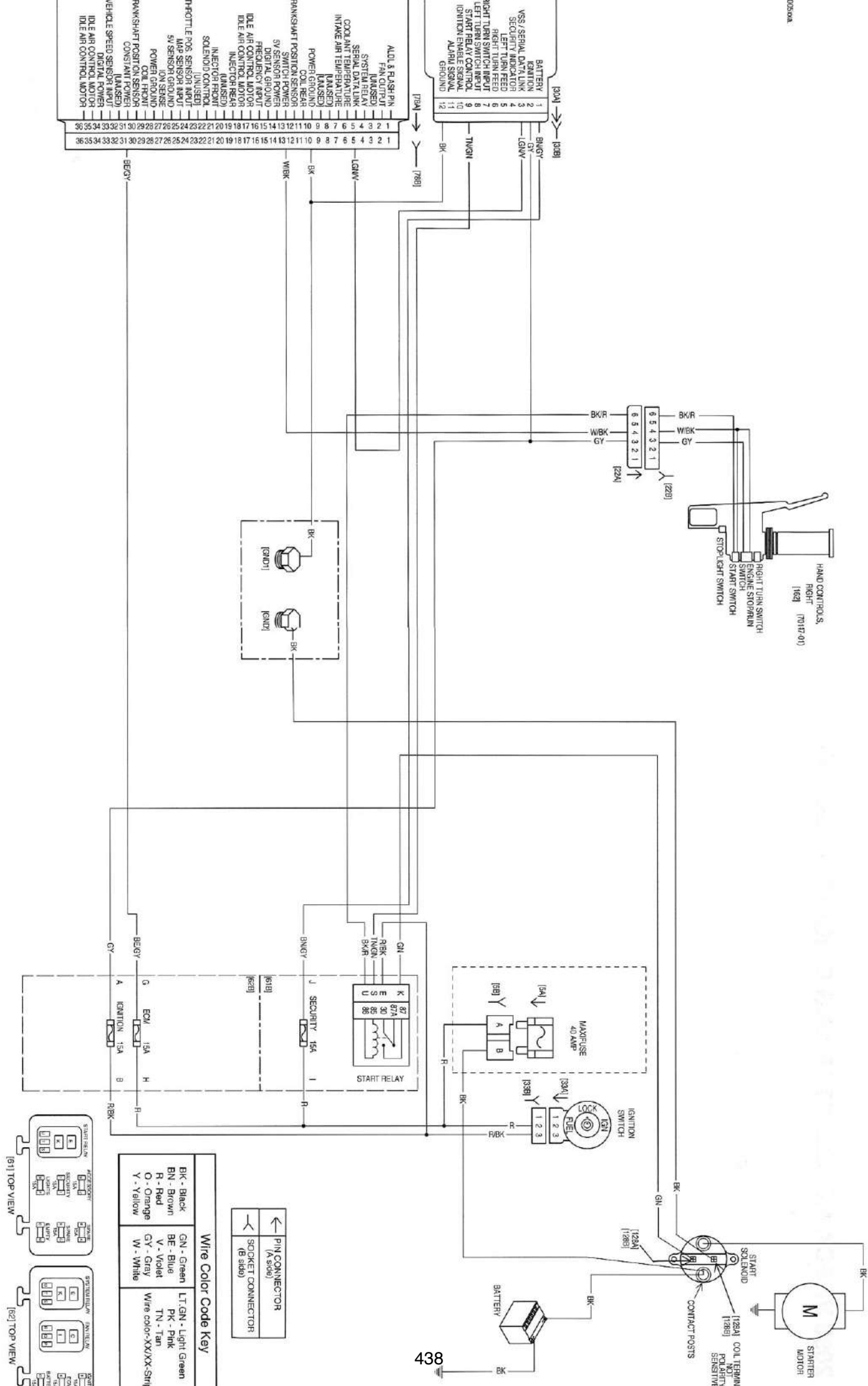


Figure B-22. Inspect Core and Insulation/Seal Crimps



INDEX

	Page No.		Page No.
Symbols			
(CARB) California Air Resources Board	4-10	Maintenance	1-15
(CKP) Crank Position Sensor	8-6	Removal	1-16
(ECM) Electronic Control Module	9-5	Storage	1-17, 1-55
(ECT) Engine Coolant Temperature Sensor ..	9-8	Testing	8-13
(EFI) Electronic Fuel Injection	9-3	Battery Cable	
(EVAP) Evaporative Emissions Control	4-10	Negative Cable Replacement	8-18
(IAC) Idle Air Control	9-9	Battery Charging	8-15
(MAP) Manifold Absolute Pressure Sensor ...	9-11	Rates/Times (table)	8-16
(TSSM) Turn Signal Security Module	8-25	Safety Precautions	8-15
(VIN) Vehicle Identification Number	2-5	Battery Electrolyte Antidote (table)	8-13
(VSS) Vehicle Speed Sensor	8-28	Battery Storage	8-17
Numerics		Belt	
46°/31° Exhaust Seat Cutter (HD-35758-53) ..	3-32	Cleaning	1-30
46°/31° Intake Seat Cutter (HD-35758-A)	3-32	Inspection	1-30
70° Intake Seat Cutter (HD-35758-54)	3-32	Belt Guard	
A		Installation	2-86
Air Filter		Removal	2-86
Gasket	1-10	Belt Tension Gauge (HD-35381)	1-28
Replacement	1-9	Big-Twin Mainshaft Primary	
Air Tool Safety	1-3	Bearing Remover and Installer (HD-34902) ..	3-65
Airbox		Black Light Leak Detector (HD-35457)	6-7
Installation	1-10	Bleeding Clutch Fluid Line	1-26
Removal	1-9	Brake Caliper Piston Remover (HD-43293) ..	2-51
Alternator		Brake Fluid Antidote	2-39
Installation	8-10	Brake Pad and Discs	
Removal	8-9	Inspection	1-21
Troubleshooting	1-59	Brakes	
Alternator Stator Cover		Bleeding Brakes	1-20
Remover/Installer Tool (HD-45304)	3-50	Disc Thickness	1-21
Amp Multilock Connectors		Fluid Inspection	1-18
Crimping	B-4	Front Caliper Pad Replacement	1-23
Socket/Pin Terminals	B-1	Lateral Runout and Warpage	1-21
Antidote		Pad Replacement	1-21
Battery Electrolyte (table)	8-13	Rear Caliper Pad Replacement	1-21
Brake Fluid	2-39	Rear Pedal Adjustment	1-19
B		Troubleshooting	1-60
Back Lash Gear Alignment	3-47	British Imperial System	C-4
Balance Shaft/Crankcase Specifications (table)	3-4	Bulb Chart	
Balancer Bearing Remover/Installer Tools		VRSCA (table)	8-3
(HD-45490)	3-65	C	
Battery		Cam	
Charging	8-15	Timing	1-44
Cleaning and Inspection	8-15	Cam Chain Tensioner	
Connection	1-17	Guide Pin Remover/Installer (HD-453212)	3-26
Disconnection	1-16	Cam Drive	
Disconnection and Removal	8-14	Assembly	3-90
Electrolyte Antidotes (table)	1-15	Removal	3-20
Installation	1-17	Cam Drive Timing Marks	3-96
Installation and Connection	8-16	Cam Timing Specifications (table)	3-3
C		CARB-California Air Resources Board	4-10
		Charcoal Canister	4-12
		Charging Battery	8-15
		Charging System Specifications (table)	8-1
		Chassis Specifications	2-1

	Page No.		Page No.
Checking Clutch Fluid Level	1-25	Tests for Blown Gasket	6-7
Cleaning		Torque Values (table)	6-1
Cleaning Methods	1-3	Troubleshooting	6-4
Part Protection	1-3	Cooling System Troubleshooting	
Rust or Corrosion Removal	1-3	Coolant Leaks	6-4
Cleaning Brush (HD-34751)	3-32	High Engine Temperature	6-4
Clutch		Low Engine Temperature	6-4
Adjustment/Maintenance	1-25	Counterbalance Alignment Pin (HD-45311) ..	3-57
Assembly	3-43	Counterbalancer Alignment Pin (HD-45311) .	3-65
Cleaning/Inspection	3-43	Counterbalancer Bearing	
Removal	3-38	Removal	3-65
Troubleshooting	1-59	Crank Position Sensor (CKP)	8-6
Clutch Cover Torque Sequence	3-49	Installation	8-6
Clutch Disc Aligning Spacer (HD-45654)	3-43	Removal	8-6
Clutch Fluid Line		Crankcase	
Installation	2-33	Assembly	3-57
Removal	2-33	Disassembly	3-50
Clutch Hand Lever		Crankshaft	3-76
Installation	2-32	Removal	3-75
Clutch Hub Holder		Crankshaft	
(HD-45318)	3-38, 3-43	Assembly Retainer (HD-45316)	3-57, 3-75
Clutch Master Cylinder		Crankshaft Bearing	3-71
Assembly	2-31	Cam Drive Side	3-71
Disassembly	2-30	Water Pump Side	3-72
Installation	2-31	Crankshaft Color Code	3-86
Clutch Master Cylinder/Reservoir		Crankshaft Locking	
Removal	2-29	Pin (HD-45306)	1-44, 3-20, 3-57, 3-75, 3-95
Clutch Pack	3-47	Crankshaft Rotating Wrench	
Coil		(HD-45314)	1-40, 1-44, 1-45, 1-50, 3-15, 3-20, 3-95
Maintenance	1-36	Crankshaft/Crankcase Specifications (table) .	3-5
Removal	1-36	Cylinder Compression	3-14
Compensator Cushion	2-65	Cylinder Compression Gauge	3-14
Compression Test		Cylinder Head	
Cylinder Compression	3-14	Assembly	3-34, 3-93
Results	3-14	Disassembly	3-26
Connecting Rod Journal Specifications (table)	3-4	Removal	3-26
Connecting Rod/Piston Specifications (table)	3-3	Cylinder Head Holder (HD-45333)	3-26, 3-32
Connecting Rods	3-78	Cylinder Head Holding	
Coolant & Battery Tester (HD-23688)	6-8	Fixture (HD-39786)	3-26, 3-32
Coolant Flow		Cylinder Head Specifications (table)	3-2
Flow Description	6-2	Cylinder Leakdown Tester	3-15
Coolant Fluorescent Leak		Cylinder Liner	3-82
Detection Dye (HD-29545-6)	6-7	Removal	3-75
Coolant System Pressure Tester (HD-45335)	6-5, 6-6	Cylinder Liner Remover/Installer (HD-45313)	3-75
Cooling Fans	8-34		
Installation	8-35		
Removal	8-34		
Cooling System			
Capacities (table)	6-1		
Coolant Level Check	1-12		
Coolant Pressure (table)	6-1		
Coolant Temperatures (table)	6-1		
Fan Operation (table)	6-1		
Flow	6-2		
Leak Detection Dye Test	6-7		
Pressure Cap	6-4		
Pressure Cap Test	6-5		
Pressure Test	6-6		
Storage	1-55		

D

Debris Deflector	
Installation	2-86
Removal	2-86
Deutsch Electrical Connectors	
Assembling/Installing	B-7
Crimping	B-8
Pins	B-6
Removing/Disassembling	B-5
Sockets	B-5
Dimensions	2-1
Disc Rim Runout	
Lateral	2-70

	Page No.		Page No.
Radial	2-70	Inspection	1-54
Drive Belt		Filters	
Drive Belt Wear (table)	1-31	Oil	1-14
		Pressure Side Fuel	4-5
E		Suction Side Fuel	4-5
ECM	9-5	Fluid Capacities	2-1
EFI	9-3	Fluid Conversions	
EFI System		British Imperial System	C-4
Description	9-3	Metric System	C-4
Electric Starter	5-2	U.S. System	C-4
Electrical System		Flywheel Support Fixture (HD-44358)	3-75
Troubleshooting	1-59	Fork Lock	
Electronic Control Module (ECM)	9-5	Installation	2-85
Installation	9-5	Removal	2-85
Removal	9-5	Fork Seal Driver (HD-45305)	2-80
Electronic Fuel Injection	9-3	Fork Tube Holder (HD-41177)	1-34, 2-80
Engine		Front Brake Calipers	
Bottom End Repair	3-13	Assembly	2-42
Check Engine Light	1-58	Cleaning/Inspection/Repair	2-42
Compression Test	3-14	Disassembly	2-41
Oil	1-5	Installation	2-43
Top End Repair	3-13	Removal	2-40
Torque Values (Table)	3-7	Front Brake Master Cylinder/Reservoir	
Troubleshooting	1-57	Assembly	2-38
Typical Symptoms	3-13	Cleaning/Inspection	2-38
Engine Assembly Support Fixture	2-18	Installation	2-39
Engine Coolant		Removal/Disassembly	2-37
Replacing	6-8	Front Engine Mount	
Engine Coolant Temperature Sensor (ECT)		Disassembly/Assembly	2-9
Installation	9-8	Installation	2-9
Removal	9-8	Removal	2-9
Engine Cradle (HD-42310-40)	3-17	Replacement	2-8
Engine Cradle and Stand	3-17	Front Fender	
Engine Oil		Installation	2-76
Changing	1-14	Removal	2-76
Checking/Adding	1-13	Front Fork	
Cold Engine Level Check	1-13	Assembly	2-80
Hot Engine Level Check	1-13	Cleaning/Inspection	2-78
Leaks	1-58	Disassembly	2-77
Pressure	1-59	Installation	2-81
Recommended	1-14	Removal	2-77
Engine Replacement		Front Fork Oil	
Installation	2-20	Level/Type	1-34
Removal	2-14	Replacing	1-34
Engine Specifications	3-1	Front Turn Signals	
Engine Timing Hole Plug	1-44	Replacement	8-23
EVAP Evaporative Emissions Control	4-10	Front Wheel	
Exhaust System		Assembly	2-60
Installation	2-12	Cleaning/Inspection	2-60
Removal	2-11	Disassembly	2-60
		Inspection	2-58
F		Installation	2-61
Fans		Removal	2-59
Cooling	8-34	Fuel	
Fasteners		Gasoline	1-5
Critical (table)	1-54	Gasoline Blends	1-5
		Storage	1-55
		Fuel Cap Remover/Installer (HD-45324)	4-2, 4-4

	Page No.		Page No.
Fuel Filter		I	
Pressure Side	4-5	Idle Air Control (IAC)	
Suction Side	4-5	Installation	9-10
Fuel Injectors	9-12	Removal	9-9
Fuel Level Sender		Ignition System Specifications (table)	8-1
Installation	4-6	Ignition/Light Switch	
Fuel Pressure Gauge (HD-41182)	9-14	Replacement	8-8
Fuel Pressure Regulator	9-12	Instrument Cluster	
Fuel Pressure Test	9-14	Installation	8-27
Fuel Pump		Removal	8-26
Installation	4-6	Intake Air Temperature Sensor (IAT)	
Removal	4-6	Installation	9-7
Fuel Pump Assembly		Removal	9-7
Installation	4-4	Intake Leak Test	
Removal	4-2	Intake Leak Tester	9-16
Fuel Rail/Fuel Injectors		Intake Leak Testing	9-17
Assembly	9-13		
Disassembly	9-12	J	
Removal	9-12	Jiffy Stand	
Fuel System		Cleaning	2-23
Fittings	1-39	Installation	2-24
Fuel System Torque Values	4-1	Lubrication	1-38
Fuel Tank		Removal	2-24
Capacity	4-1		
Cleaning/Inspecting	4-7	L	
Installation	4-8	Lamp Replacement	8-23
Removal	4-7	Lower Crankshaft Alignment Dowels (HD-45310)	3-57
Fuel Tubes	9-12	Lower Fork Stem Bearing	2-83
Fuse Replacement	8-4	Lower Frame Rails	
Fuse Specifications (table)	8-1	Installation	2-7
		Removal	2-7
G		Lubrication	
Gasket Alignment Dowels (HD-45340)	3-50	Cables and Hand Levers	1-38
		Jiffy Stand	1-38
H		Throttle Cables	1-39
Hammers		Troubleshooting	1-58
Safety	1-3		
Handlebars		M	
Installation	2-57	Main Bearing Journal Diameter (table)	3-86
Removal	2-56	Main Bearing Journals	3-86
Headlamp		Maintenance	
Switch	1-53	Battery	1-15
Headlamp Alignment		First Scheduled	1-6
Inspection	1-53	Safe Operations	1-1
Headlamp Bulb		Schedule	1-6
Removal	8-20	Manifold Absolute Pressure Sensor (MAP) ...	9-11
Replacement	8-20	Installation	9-11
Headlamp Lens		Removal	9-11
Removal	8-20	Maxi-Fuse	8-7
Replacement	8-20	Metric Conversions	
Horn		British Imperial System	C-4
Inspection	8-33	Fastener Torque Values	C-2
Replacement	8-33	Metric Fluid Conversions	C-4
Hose Clamp Pliers		Metric System	C-4
(HD-41137)	2-47, 4-5, 4-6	Mini-Deutsch Connectors	B-10

	Page No.		Page No.
Crimping	B-10	Pliers/Cutters/Prybars	
		Safety	1-3
		Pressure Side Fuel Filter	4-5
		Primary Gear Timing	3-80
		Pro-level Oil Gauge (HD-59000A)	1-34, 2-80
		Punches/Chisels Safety	1-3
		Purge Solenoid	4-11
N			
Neutral Switch			
Installation	8-29		
Removal	8-29		
Neway Valve Seat Cutter	3-32		
		R	
O		Radiator/Oil Cooler	
Oil		Installation	6-20
Changing Engine Oil	1-14	Removal	6-18
Checking/Adding Engine Oil	1-13	Ratchets and Handles	
Cold Engine Level Check	1-13	Safety	1-4
Engine Oil Pressure	1-59	Rear Belt	
Hot Engine Level Check	1-13	Inspection	1-30
Leaks	1-58	Rear Belt Deflection	
Recommended Engine Oil	1-14	Inspection	1-28
Winter Lubrication	1-5	Rear Brake Caliper	
Oil Cooler		Assembly	2-54, 2-55
Installation	6-21	Cleaning/Inspection/Repair	2-53
Removal	6-21	Disassembly	2-51
Oil Filter Mount		Removal	2-51
Replacement	3-89	Rear Brake Master Cylinder/Reservoir	
Oil Filter Wrench (HD-44067)	1-14	Assembly	2-48
Oil Line Fittings		Cleaning/Inspection	2-48
Installation	6-17	Disassembly	2-47
Removal	6-17	Installation	2-50
Oil Pressure Gauge	3-12	Removal	2-45
Oil Pressure Gauge Adapter (HD-45309)	3-12	Rear Engine Mounts	
Oil Pressure Indicator Lamp	3-12	Installation	2-13
Oil Pressure Switch		Removal	2-13
Installation	8-31	Rear Fender/Supports	
Removal	8-30	Installation	2-96
Oil Pressure Testing	3-12	Removal	2-95
Oil Pump		Rear Fork	
Removal	3-36	Assembly	2-90
		Disassembly	2-90
		Installation	2-91
		Removal	2-89
P		Rear Shock	
Packard ECM Connector	B-17	Preload Adjustment	1-32
Packard Electrical Connectors		Rear Shock Absorbers	
Crimping	B-15, B-18	Installation	2-87
Pull-to-Seat Terminals	B-14	Removal	2-87
Push-to-Seat Terminals	B-14	Rear Shock Spanner Wrench (HD-94700-52C)	1-32
Passenger Footrests		Rear Turn Signals, Replacement	8-24
Installation	2-25	Rear Wheel	
Removal	2-25	Assembly	2-65
Passenger Grabstrap	2-93	Cleaning/Inspection	2-64
Piston		Disassembly	2-64
Installation	3-84	Inspection	2-62
Piston Jet	3-82	Installation	2-66
Piston Removal	3-75	Removal	2-63
Piston Ring Compressor	3-84	Relay Replacement	8-4
Piston Ring Compressor (HD-96333-51C)	3-75	Relay/Fuse Block	
Piston Ring Specifications (table)	3-3	Installation	8-5
Piston/Cylinder Liner Specifications (table) ...	3-4		

	Page No.		Page No.
Removal	8-4	Connecting Rod/Piston	3-6
Repair and Replacement Procedures		Crankshaft/Crankcase	3-6
Bearings	1-2	Cylinder Heads	3-6
Bushings	1-2	Piston Rings	3-6
Gaskets	1-2	Piston/Cylinder Liner	3-6
Gears	1-2	Servicing a New Motorcycle	1-1
Hardware and Threaded Parts	1-2	Shift Drum	
Instruments and Gauges	1-2	Removal	3-55
Lip Type Seals	1-2	Shift Lever Substitute (HD-45338)	3-57
O-Rings (Preformed Packings)	1-2	Shift Mechanism/Detent Retractor	
Part Replacement	1-2	(HD-45339)	3-55, 3-57
Shafts	1-2	Shift Shaft and Seal	3-73
Wiring, Hoses and Lines	1-2	Installation	3-74
Repair Notes	1-1	Removal	3-73
Resistive Plug	4-9	Shop Practices	
Rider Footrests		Disassembly and Assembly	1-2
Removal	2-25	Removing Parts	1-1
Robinair Heat Gun (HD-25070)	6-16	Repair Notes	1-1
Rod Bearing Journals	3-85	Safety	1-1
Rod Caps	3-78	Side Lift Extension	2-14
Rolling Stand (HD-45646)	3-17	Spark Plugs	
		Installation	1-37
		Maintenance	1-36
		Removal	1-36
		Replacement	1-37
		Storage	1-55
		Troubleshooting	1-58
		Type	1-37
		Specialty Tools	A-1
		Specifications	8-1
		Charging System	8-1
		Engine General	3-1
		Fuse (table)	8-1
		Ignition System (table)	8-1
		Water Pump	3-1
		Sprockets	
		Cleaning	1-30
		Inspection	1-30
		Starter	
		Installation	5-6
		Removal	5-6
		Starter Performance Specifications	5-1
		Starter Relay	
		Installation	5-5
		Removal	5-4
		Starter Solenoid	
		Installation	5-7
		Removal	5-7
		Starter Specifications	5-1
		Starter Torque Values	5-1
		Starting Circuit Schematic	5-3
		Steering Head	
		Assembly	2-84
		Cleaning/Inspection	2-83
		Installation	2-84
		Removal	2-82
		Steering Head Bearing Race	2-83
		Steering Head Bearing Race Installer	
		(HD-39302)	2-84

S

Safe Operating Maintenance	1-1
Safety	
Air Tools	1-3
Hammers	1-3
Pliers/Cutters/Prybars	1-3
Punches/Chisels	1-3
Ratchets and Handles	1-4
Screwdrivers	1-3
Shop Practices	1-1
Storage Units	1-4
Wrenches	1-3
Screwdrivers	
Safety	1-3
Sealed Butt Splice Connectors	B-12
Installation	B-12
Sealed Wheel Bearings	
Installation	2-69
Removal	2-68
Seat	
Cleaning/Inspection	2-93
Installation	2-94
Removal	2-93
Seat Latch	
Replacement	2-92
Secondary Cam Chain	1-50
Secondary Cam Chain Measurement Tool ...	1-50
Secondary Cam Chain Tensioner	1-51
Secondary Chain Measuring Tool (HD-45334)	3-14
Secondary Clutch Actuator	
Assembly	2-34
Disassembly	2-34
Installation	2-35
Removal	2-34
Service Wear Limits	
Connecting Rod/Crankshaft	3-6

	Page No.
Steering Head Bearing Race Remover (HD-39301-A)	2-83
Steering Head Bearings Adjustment	1-33
Stop Light Switch Installation	8-32
Removal	8-32
Storage Battery	1-17, 8-17
Preparation	1-55
Removal From	1-56
Safety	1-4
Stripping Motorcycle for Service	3-16
Suction Side Fuel Filter	4-5
Suspension Preload Adjustment	1-32
T	
Tail Lamp Installation	8-22
Removal	8-21
Tappet Compressing Tool (HD-45491)	3-20, 3-933-26
TDC Positioning Tool (HD-45653)	1-44, 3-20, 3-95
Testing Battery	8-13
Thermostat Installation	6-11
Removal	6-10
Thermostat Removal Tool (HD-45307)	6-10, 6-11
Throttle Body Installation	3-19
Removal	3-18
Throttle Cables Adjustment	1-39
Assembly/Installation	2-28
Cleaning and Inspection	2-27
Inspection and Lubrication	1-39
Removal/Disassembly	2-27
Throttle Position Sensor (TP)	9-6
Installation	9-6
Removal	9-6
Tie Link	2-9
Timing Hole Plug	1-44
Tire Pressures	2-1
Tire Runout Lateral	2-74
Radial	2-74
Tire Spreader (HD-21000)	2-72
Tires Cleaning/Inspection	2-72
Demounting	2-71
General	2-71
Inspection	1-24
Mounting	2-73
Pressures (table)	1-24

	Page No.
Storage	1-55
Tire Replacement	2-72
Tool Safety	1-3
Tools Secondary Cam Chain Measurement Tool	1-50
Torque Values Electrical (table)	8-2
Engine (table)	3-7
Fuel System (table)	9-2
Starter	5-1
Transmission	7-1
Transmission (table)	7-1
Transmission Input Shaft Assembly (1st gear end)	7-16
Input Shaft Assembly (2nd gear end)	7-14
Input Shaft Disassembly (1st gear end) ..	7-16
Input Shaft Disassembly (2nd gear end) .	7-11
Output Shaft Assembly (1st gear end)	7-9
Output Shaft Assembly (2nd gear end) ...	7-6
Output shaft Disassembly (2nd gear end)	7-2
Torque Values	7-1
Troubleshooting	1-59
Transmission Assembly Retainer Tool (HD-45301)	3-50, 3-57
Troubleshooting Alternator	1-59
Brakes	1-60
Check Engine Light	1-58
Clutch	1-59
Cooling System	6-4
Electrical System	1-59
Engine	1-57
General	1-57
Handling	1-60
Ignition	1-58
Lubrication System	1-58
Spark Plugs	1-58
Starter Motor	1-57
Starting	1-57
Transmission	1-59
Valve Train	1-58
TSSM	8-25
Turn Signal Security Module (TSSM) Installation	8-25
Removal	8-25
Turn Signal/Running Light Bulb Replacement	8-23
Turn Signals Front Replacement	8-23
Rear Replacement	8-24

U	
Universal Driver Handle (HD-33416)	2-83
Universal Wedge Attachment (HD-95637-46A) ..	2-83

V

Valve Diameters Specifications (table)	3-1
Valve Guide Seal Installer (HD-45322)	3-34
Valve Lash	
Adjustment	1-45
Measurement	1-40
Specifications	1-42
Specifications (table)	3-1
Valve Lash Calculation Worksheet	D-3, D-5
Valve Spring Compressor	
(HD-34736-B)	3-26, 3-34
Valve Tappet Shims	
Case 1 (table)	D-1
Case 2 (table)	D-1
Valve Train	
Troubleshooting	1-58
Valve Train Noise Diagnostics	3-14
Vapor Valve	
Replacement	4-9, 4-11
Vehicle Identification Number (VIN)	2-5
Vehicle Speed Sensor (VSS)	
Installation	8-28
Removal	8-28
Voltage Regulator	
Installation	8-12
Removal	8-11
Voltmeter Test	8-13
Voltmeter Test (table)	8-13
VRSCA Bulb Chart (table)	8-3

W

Water Pump	
Installation	6-13
Removal	6-12
Specifications	3-1
Wedge Attachment (HD-95637)	3-65
Weights	2-1
Wheel Bearing Installer/Remover	
(HD-44060)	2-68
Wheel Bearings	
Lateral End Play	2-67
Maintenance	1-24
Wheel Truing Stand (HD-95599-80)	2-75
Wheel Truing Stand (HD95599-80)	2-70
Winter Lubrication Oil	1-5
Wrenches	
Safety	1-3

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