



2008 Dyna Models Service Manual

©2007 H-D.
ALL RIGHTS RESERVED
99481-08

Printed in the U.S.A.

VISIT THE HARLEY-DAVIDSON WEB SITE
<http://www.harley-davidson.com>

MAINTENANCE

1.1 GENERAL

Servicing a New Motorcycle.....	1-1
Safe Operating Maintenance.....	1-1
Shop Practices.....	1-1
Repair Notes.....	1-1
Safety.....	1-1
Removing Parts.....	1-1
Cleaning.....	1-1
Disassembly and Assembly.....	1-2
Checking Torques on Fasteners with Lock Patches.....	1-2
Magnetic Parts Trays.....	1-2
Repair and Replacement Procedures.....	1-2
Hardware and Threaded Parts.....	1-2
Threadlocking Agents.....	1-2
Wiring, Hoses and Lines.....	1-2
Instruments and Gauges.....	1-2
Bearings.....	1-2
Bushings.....	1-2
Gaskets.....	1-2
Lip Type Seals.....	1-2
O-Rings (Preformed Packings).....	1-3
Gears.....	1-3
Shafts.....	1-3
Part Replacement.....	1-3
Exhaust System Leakage.....	1-3
Cleaning.....	1-3
Part Protection.....	1-3
Cleaning Process.....	1-3
Rust or Corrosion Removal.....	1-3
Bearings.....	1-3
Tool Safety.....	1-3
Air Tools.....	1-3
Wrenches.....	1-3
Pliers/Cutters/Pry bars.....	1-3
Hammers.....	1-4
Punches/Chisels.....	1-4
Screwdrivers.....	1-4
Ratchets and Handles.....	1-4
Sockets.....	1-4
Storage Units.....	1-4

1.2 MAINTENANCE SCHEDULE

General.....	1-5
--------------	-----

1.3 FUEL AND OIL

Fuel.....	1-8
Gasoline Blends.....	1-8
Engine Lubrication.....	1-8
Winter Lubrication.....	1-9

1.4 ENGINE OIL AND FILTER

Checking and Adding Oil.....	1-10
Type of Oil.....	1-10
Checking with Cold Engine.....	1-10
Checking with Warm Engine.....	1-10
Changing Oil and Filter.....	1-11

1.5 BULB REQUIREMENTS

General.....	1-12
--------------	------

1.6 BRAKES

Fluid Inspection.....	1-13
Rear Pedal Height.....	1-13

1.7 AIR CLEANER AND EXHAUST SYSTEM

Removal.....	1-15
Installation.....	1-15
Exhaust System Leak Check.....	1-16

1.8 TIRES AND WHEELS

Tires.....	1-17
Tire Replacement.....	1-17
Wheel Bearings.....	1-18
Wheel Spokes.....	1-18

1.9 PRIMARY CHAIN

General.....	1-19
Changing Primary Chaincase Lubricant.....	1-19

1.10 TRANSMISSION LUBRICANT

Changing Transmission Lubricant.....	1-21
--------------------------------------	------

1.11 CLUTCH

Adjustment.....	1-22
-----------------	------

1.12 REAR BELT AND SPROCKETS

General.....	1-24
Cleaning.....	1-24
Inspection.....	1-24
Sprockets.....	1-24
Rear Belt.....	1-24

1.13 REAR BELT DEFLECTION

Inspection.....	1-26
Adjustment.....	1-27

1.14 THROTTLE CABLES

Cable Inspection, Lubrication and Adjustment.....	1-28
Inspection and Lubrication.....	1-28
Adjustment.....	1-28

1.15 BLEEDING BRAKES

General.....	1-29
Procedure.....	1-29

1.16 BRAKE PADS AND DISCS

Inspection.....	1-30
Brake Pads.....	1-30
Brake Disc Thickness.....	1-30
Brake Disc Lateral Runout and Warpage.....	1-30
Brake Pad Replacement.....	1-30
Rear Brake Caliper.....	1-30
Front Brake Caliper.....	1-31

1.17 BATTERY MAINTENANCE

General.....	1-33
Cleaning and Inspection.....	1-34
Voltmeter Test.....	1-34
Voltmeter Test.....	1-34
Charging Battery.....	1-34
Safety Precautions.....	1-34
Using a Battery Charger.....	1-34
Disconnection and Removal.....	1-35
Storage.....	1-36
Installation and Connection.....	1-36

1.18 SUSPENSION ADJUSTMENTS

Rear Shock Preload Adjustment.....	1-38
------------------------------------	------

TABLE OF CONTENTS

1.19 SPARK PLUGS

Inspection.....	1-39
Spark Plug Cable Inspection.....	1-39

1.20 STEERING HEAD BEARINGS

Adjustment.....	1-41
Bearing Adjustment (Fall Away).....	1-41
Lubrication.....	1-41

1.21 FRONT FORK OIL

Replacing Fork Oil.....	1-42
-------------------------	------

1.22 CABLE AND CHASSIS LUBRICATION

General.....	1-43
Cables and Hand Levers.....	1-43
Jiffy Stand.....	1-43

1.23 HEADLAMP ALIGNMENT

Inspection.....	1-44
Adjustment.....	1-44
All Models.....	1-44

1.24 CRITICAL FASTENERS

Inspection.....	1-46
-----------------	------

1.25 ENGINE MOUNTS

Inspection.....	1-47
-----------------	------

1.26 STORAGE

General.....	1-48
Placing in Storage.....	1-48
Removal from Storage.....	1-48

1.27 TROUBLESHOOTING

General.....	1-50
Engine.....	1-50
Starter Motor Does Not Operate or Does Not Turn Engine Over.....	1-50
Engine Turns Over But Does Not Start.....	1-50
Starts Hard.....	1-50
Starts But Runs Irregularly or Misses.....	1-50
Spark Plug Fouls Repeatedly.....	1-50
Pre-Ignition or Detonation (Knocks or Pings).....	1-50
Overheating.....	1-51
Valve Train Noise.....	1-51
Excessive Vibration.....	1-51
Check Engine Light Illuminates During Operation.....	1-51
Lubrication System.....	1-51
Oil Does Not Return To Oil Pan.....	1-51
Engine Uses Too Much Oil Or Smokes Excessively... ..	1-51
Engine Leaks Oil From Cases, Push Rods, Hoses, Etc.....	1-51
Low Oil Pressure.....	1-51
High Oil Pressure.....	1-51
Electrical System.....	1-51
Alternator Does Not Charge.....	1-51
Alternator Charge Rate Is Below Normal.....	1-51
Speedometer Operates Erratically.....	1-52
Transmission.....	1-52
Shifts Hard.....	1-52

Jumps Out Of Gear.....	1-52
Clutch Slips.....	1-52
Clutch Drags Or Does Not Release.....	1-52
Clutch Chatters.....	1-52
Handling.....	1-52
Irregularities.....	1-52
Brakes.....	1-52
Brake Does Not Hold Normally.....	1-52

CHASSIS

2.1 SPECIFICATIONS

Specifications.....	2-1
Tires.....	2-1

2.2 VEHICLE IDENTIFICATION NUMBER (V.I.N.)

General.....	2-3
--------------	-----

2.3 FRONT WHEEL

Removal.....	2-5
Disassembly.....	2-5
Cast Wheel.....	2-5
Cast Wheel, Dual Brakes.....	2-5
Laced Wheel.....	2-5
Cleaning and Inspection.....	2-8
Assembly.....	2-8
Cast Wheel.....	2-9
Laced Wheel.....	2-9
Installation.....	2-9

2.4 REAR WHEEL

Removal.....	2-10
Disassembly.....	2-10
Cleaning and Inspection.....	2-11
Assembly.....	2-11
Installation.....	2-12

2.5 SEALED WHEEL BEARINGS

Inspection.....	2-13
Removal.....	2-13
Installation.....	2-14

2.6 WHEEL LACING: 17 INCH RIM

General.....	2-16
Procedure.....	2-16
Hub: Brake Disc Flange Up.....	2-16
Hub: Sprocket Side Up.....	2-17

2.7 WHEEL LACING: 19 INCH RIM

Procedure.....	2-19
----------------	------

2.8 WHEEL LACING: 21 INCH RIM

General.....	2-23
Procedure.....	2-23

2.9 TRUING LACED WHEELS

General.....	2-26
Lateral Truing.....	2-26
Radial Truing.....	2-27

TABLE OF CONTENTS

2.10 CHECKING CAST WHEEL RUNOUT

General.....	2-29
Lateral Runout.....	2-29
Radial Runout.....	2-29

2.11 VEHICLE ALIGNMENT

Inspection.....	2-30
-----------------	------

2.12 FRONT BRAKE MASTER CYLINDER

General.....	2-32
Removal and Disassembly.....	2-32
Cleaning and Inspection.....	2-34
Assembly and Installation.....	2-34

2.13 FRONT BRAKE CALIPER

Removal.....	2-36
Disassembly.....	2-36
Cleaning, Inspection and Repair.....	2-38
Assembly.....	2-39
Installation.....	2-39

2.14 REAR BRAKE MASTER CYLINDER

General.....	2-41
Removal.....	2-41
Disassembly.....	2-42
Cleaning and Inspection.....	2-43
Assembly.....	2-43
Installation.....	2-43

2.15 REAR BRAKE CALIPER

Removal.....	2-45
Disassembly.....	2-45
Cleaning, Inspection and Repair.....	2-47
Assembly.....	2-48
Installation.....	2-48

2.16 TIRES

General.....	2-50
Removal.....	2-50
Cleaning, Inspection and Repair.....	2-51
Installation.....	2-51
Tube Type Tires.....	2-51
Tubeless Tires.....	2-52

2.17 FRONT FORK

Removal.....	2-53
Disassembly.....	2-53
Cleaning and Inspection.....	2-56
Assembly.....	2-56
Installation.....	2-57

2.18 STEERING HEAD

Removal.....	2-58
Inspection.....	2-58
Disassembly.....	2-59
Steering Head Bearing Race Removal.....	2-59
Assembly.....	2-60
Installation.....	2-60

2.19 BELT GUARD

Removal.....	2-61
Installation.....	2-61

2.20 DEBRIS DEFLECTOR

Removal.....	2-62
Installation.....	2-62

2.21 THROTTLE CONTROL

Removal/Disassembly.....	2-63
Cleaning and Inspection.....	2-63
Assembly/Installation.....	2-63
Throttle Cable Routing.....	2-63

2.22 REAR SHOCK ABSORBERS

General.....	2-65
Removal.....	2-65
Inspection.....	2-65
Installation.....	2-65

2.23 REAR FORK

Removal.....	2-66
Disassembly.....	2-67
Cleaning and Inspection.....	2-67
Assembly.....	2-67
Installation.....	2-67

2.24 CLUTCH CONTROL

Removal.....	2-68
Installation.....	2-68

2.25 HANDLEBARS: ALL BUT FXDWG/FXDF

Removal.....	2-69
All Models.....	2-69
FXD/FXDC Models.....	2-69
FXDB.....	2-69
FXDL Models.....	2-70
Installation.....	2-70
FXD/FXDC Models.....	2-70
FXDB Models.....	2-71
FXDL Models.....	2-71
All Models.....	2-71

2.26 HANDLEBARS: FXDWG/FXDF

Removal.....	2-72
Installation.....	2-72

2.27 FRONT FENDER

Removal.....	2-75
Installation.....	2-75

2.28 REAR FENDER

General.....	2-76
Removal.....	2-76
Tail Lamp/Turn Signal Harness Routing.....	2-76
Installation.....	2-76
FXDWG/FXDF.....	2-77
Removal.....	2-77
Installation.....	2-77
FXD, FXDC, FXDB and FXDL Models.....	2-77

TABLE OF CONTENTS

Removal.....	2-77
Installation.....	2-77
2.29 SEAT	
Removal.....	2-78
Installation.....	2-78
2.30 JIFFY STAND	
Cleaning.....	2-80
Sensor (HDI Models).....	2-80
Removal.....	2-81
Installation.....	2-81
2.31 ENGINE MOUNTS	
Removal.....	2-83
Front Isolator.....	2-83
Rear Isolator.....	2-83
Installation.....	2-83
Front Isolator.....	2-83
Rear Isolator.....	2-83
ENGINE	
3.1 SPECIFICATIONS	
Specifications.....	3-1
3.2 SERVICE WEAR LIMITS	
General.....	3-3
3.3 ENGINE OIL FLOW	
Oil Feed.....	3-5
Top End.....	3-6
Bottom End.....	3-7
Oil Return.....	3-9
3.4 OIL PUMP OPERATION	
General.....	3-10
Operation.....	3-10
3.5 BREATHER OPERATION	
General.....	3-12
3.6 OIL PRESSURE	
Oil Pressure Indicator Lamp.....	3-13
Checking Oil Pressure.....	3-13
3.7 TROUBLESHOOTING	
Diagnosing Valve Train Noise.....	3-14
Compression Test.....	3-14
Cylinder Leakdown Test.....	3-14
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 HOW TO USE THIS SECTION	
Top End Repair.....	3-16
Bottom End Repair.....	3-16
Typical Symptoms.....	3-16

3.9 TOP END SERVICE	
Engine in Chassis.....	3-17
Engine Removed from Chassis.....	3-18
3.10 BOTTOM END SERVICE	
Engine in Chassis.....	3-19
Engine Removed From Chassis.....	3-20
3.11 STRIPPING MOTORCYCLE FOR SERVICE	
Procedure.....	3-21
3.12 ASSEMBLING MOTORCYCLE AFTER SERVICE	
Procedure.....	3-22
3.13 REMOVING ENGINE FROM CHASSIS	
Procedure.....	3-23
3.14 INSTALLING ENGINE IN CHASSIS	
Procedure.....	3-24
3.15 TOP END OVERHAUL: DISASSEMBLY	
General.....	3-26
Breather Assembly.....	3-26
Rocker Arm Support Plate.....	3-27
Push Rods, Lifters and Covers.....	3-28
Cylinder Head.....	3-29
Cylinder.....	3-30
Piston.....	3-30
3.16 TOP END OVERHAUL: ASSEMBLY	
General.....	3-32
Piston.....	3-32
Cylinder.....	3-33
Cylinder Head.....	3-35
Push Rods, Lifters and Covers.....	3-39
Rocker Arm Support Plate.....	3-40
Breather Assembly.....	3-41
3.17 BOTTOM END OVERHAUL: DISASSEMBLY	
General.....	3-43
Cover and Cam Support Plate.....	3-43
Prepare Engine.....	3-43
Cam Chain and Sprockets.....	3-43
Cam Support Plate.....	3-44
Crankcase.....	3-45
3.18 BOTTOM END OVERHAUL: ASSEMBLY	
General.....	3-47
Crankcase.....	3-47
Cover and Cam Support Plate.....	3-49
3.19 BREATHER ASSEMBLY	
Removal Overview.....	3-54
Disassembly.....	3-54
Cleaning and Inspection.....	3-54
Assembly.....	3-54

TABLE OF CONTENTS

Installation Overview.....	3-54	Removal.....	3-82
3.20 ROCKER ARM SUPPORT PLATE		Assembly.....	3-83
Removal Overview.....	3-55	Oil Pressure Relief Valve.....	3-84
Disassembly.....	3-55	Removal.....	3-84
Cleaning and Inspection.....	3-55	Installation.....	3-84
Inspection.....	3-55	Inspection.....	3-85
Rocker Shaft Fit.....	3-55	Cam Needle Bearings.....	3-85
Rocker Arm Shaft to Bushing.....	3-56	Removal.....	3-85
Replace Rocker Arm Bushings.....	3-56	Installation.....	3-86
Assembly.....	3-57	Cleaning and Inspection.....	3-88
Installation Overview.....	3-57	Oil Pressure Valve.....	3-88
		Cam Support Plate.....	3-88
3.21 PUSH RODS, LIFTERS AND COVERS		Installation Overview.....	3-88
Removal Overview.....	3-58	3.26 OIL PUMP	
Disassembly.....	3-58	Removal Overview.....	3-89
Cleaning and Inspection.....	3-58	Cleaning and Inspection.....	3-89
Lifter Inspection.....	3-59	Installation Overview.....	3-89
Assembly.....	3-59	3.27 CRANKCASE	
Installation Overview.....	3-60	Removal Overview.....	3-90
3.22 CYLINDER HEAD		Right Crankcase Half.....	3-90
Removal Overview.....	3-61	Crankshaft Bearing Removal.....	3-90
Disassembly.....	3-61	Crankshaft Bearing Installation.....	3-90
Cleaning.....	3-62	Piston Jets Removal.....	3-91
Inspection.....	3-63	Piston Jets Installation.....	3-91
Cylinder Head.....	3-63	Left Crankcase Half.....	3-91
Valve Guides.....	3-63	Crankshaft (Roller) Bearing Removal.....	3-91
Valves.....	3-63	Crankshaft (Roller) Bearing Installation.....	3-93
Valve Springs.....	3-63	Sprocket Shaft Bearing Inner Race.....	3-94
Tapered Keepers.....	3-64	Removal.....	3-94
Valve Seats.....	3-64	Installation.....	3-95
Valve Guide Replacement.....	3-64	Cylinder Studs.....	3-96
Removal.....	3-64	Removal.....	3-96
Installation.....	3-65	Installation.....	3-96
Valve and Seat Refacing.....	3-68	Pipe Plug and Oil Fittings.....	3-97
Assembly.....	3-70	Removal.....	3-97
Installation Overview.....	3-71	Installation.....	3-97
3.23 CYLINDER		Cleaning and Inspection.....	3-97
Removal Overview.....	3-72	Installation Overview.....	3-97
Cleaning.....	3-72	3.28 FLYWHEEL AND CONNECTING RODS	
Inspection.....	3-73	Removal Overview.....	3-98
Deglazing Cylinder.....	3-74	Inspection.....	3-98
Boring and Honing Cylinder.....	3-75	Installation Overview.....	3-98
Installation Overview.....	3-75	3.29 OIL PAN	
3.24 PISTON		Removal.....	3-99
Removal Overview.....	3-76	Installation.....	3-99
Disassembly.....	3-76	FUEL SYSTEM	
Piston Rings.....	3-76	4.1 SPECIFICATIONS: FUEL SYSTEM	
Cleaning.....	3-76	Specifications.....	4-1
Inspection.....	3-77	4.2 ELECTRONIC FUEL INJECTION (EFI)	
Assembly.....	3-78	Troubleshooting.....	4-2
Checking Piston Ring Gap.....	3-78	4.3 IDLE SPEED	
Installing Piston Rings.....	3-79	General.....	4-3
Installation Overview.....	3-80		
3.25 COVER AND CAM SUPPORT PLATE			
Removal Overview.....	3-81		
Camshafts.....	3-82		

TABLE OF CONTENTS

4.4 AIR CLEANER ASSEMBLY

Removal.....	4-4
Installation.....	4-5
Backplate Assembly: HDI Models.....	4-5

4.5 FUEL TANK

General.....	4-7
Removal.....	4-7
Cleaning and Inspection.....	4-9
Installation.....	4-9
Vapor Valve.....	4-9

4.6 THROTTLE POSITION SENSOR (TPS)

General.....	4-10
Removal.....	4-10
Installation.....	4-10

4.7 INTAKE AIR TEMPERATURE SENSOR (IAT)

General.....	4-11
Removal.....	4-11
Installation.....	4-11

4.8 ENGINE TEMPERATURE SENSOR (ET)

General.....	4-12
Removal.....	4-12
Installation.....	4-13

4.9 INDUCTION MODULE

Removal.....	4-14
Installation.....	4-15

4.10 IDLE AIR CONTROL (IAC)

General.....	4-16
Removal.....	4-16
Installation.....	4-16

4.11 MANIFOLD ABSOLUTE PRESSURE SENSOR (MAP)

General.....	4-17
Removal.....	4-17
Installation.....	4-17

4.12 OXYGEN SENSOR

General.....	4-18
Removal.....	4-18
Installation.....	4-18

4.13 FUEL INJECTORS

General.....	4-19
Removal.....	4-19
Installation.....	4-19

4.14 FUEL PUMP

General.....	4-21
Removal.....	4-21
Disassembly/Assembly.....	4-23
Fuel Filter.....	4-23
Regulator.....	4-23

Inlet Sock.....	4-24
Fuel Pump.....	4-25
Installation.....	4-25

4.15 FUEL PRESSURE TEST

General.....	4-29
Testing.....	4-29

4.16 EXHAUST SYSTEM

Removal: All but FXDF.....	4-31
Disassembly: All but FXDF.....	4-33
Assembly: All but FXDF.....	4-33
Installation: All but FXDF.....	4-33
Removal: FXDF.....	4-34
Installation: FXDF.....	4-35

4.17 INTAKE LEAK TEST

General.....	4-37
Leak Tester.....	4-37
Parts List.....	4-37
Tester Assembly.....	4-37
Tester Adjustment.....	4-37
Procedure.....	4-37

4.18 EVAPORATIVE EMISSIONS CONTROL (CA MODELS)

General.....	4-39
Charcoal Canister.....	4-39
Removal.....	4-39
Installation.....	4-40

STARTER

5.1 SPECIFICATIONS: STARTER

Specifications.....	5-1
---------------------	-----

5.2 STARTER

General.....	5-2
Starter Relay.....	5-2
Wiring Diagrams.....	5-2
Removal.....	5-2
Installation.....	5-2
Testing.....	5-2
Armature.....	5-2
Brushes and Brush Holder.....	5-5
Field Coil Assembly.....	5-6
Disassembly.....	5-6
Inspection.....	5-6
Assembly.....	5-6
Drive Assembly.....	5-7
Disassembly.....	5-7
Inspection.....	5-7
Assembly.....	5-7

5.3 STARTER SOLENOID

Solenoid Assembly.....	5-8
Disassembly.....	5-8
Assembly.....	5-8
Solenoid Plunger.....	5-8
Disassembly.....	5-8

TABLE OF CONTENTS

Assembly.....	5-8
Solenoid Contacts.....	5-8
Disassembly.....	5-8
Assembly.....	5-9

DRIVE

6.1 SPECIFICATIONS: DRIVE

Specifications.....	6-1
---------------------	-----

6.2 PRIMARY CHAINCASE COVER

General.....	6-2
Removal.....	6-2
Installation.....	6-2

6.3 DRIVE COMPONENTS

Removal.....	6-3
Installation.....	6-4

6.4 PRIMARY CHAINCASE HOUSING

Removal.....	6-8
Inspection.....	6-8
Mainshaft Bearing and Lip Seal.....	6-8
Removal.....	6-8
Installation.....	6-8
Mainshaft Bearing Inner Race.....	6-9
Removal.....	6-9
Installation.....	6-9
Shifter Shaft Bushing.....	6-10
Installation.....	6-11

6.5 CLUTCH

Removal and Installation.....	6-13
Clutch Pack Only.....	6-13
Partial Disassembly.....	6-13
Cleaning And Inspection.....	6-13
Assembly.....	6-14
Clutch Pack and Bearing.....	6-15
Complete Disassembly.....	6-15
Assembly.....	6-16

6.6 TRANSMISSION SPROCKET

Removal.....	6-18
Cleaning and Inspection.....	6-18
Installation.....	6-19

6.7 DRIVE BELT

Removal.....	6-21
Installation.....	6-21

TRANSMISSION

7.1 SPECIFICATIONS: TRANSMISSION

Specifications.....	7-1
Service Wear Limits.....	7-1

7.2 TRANSMISSION

Power Flow.....	7-2
Neutral.....	7-2
1st Gear.....	7-2

2nd Gear.....	7-2
3rd Gear.....	7-2
4th Gear.....	7-2
5th Gear.....	7-2
6th Gear.....	7-2

7.3 SHIFTER LINKAGE

Adjustment.....	7-4
-----------------	-----

7.4 CLUTCH RELEASE COVER

Removal and Disassembly.....	7-5
Cleaning and Inspection.....	7-5
Assembly and Installation.....	7-6

7.5 TRANSMISSION ASSEMBLY

Removal.....	7-7
Disassembly.....	7-8
Shifter Cam/Shifter Forks.....	7-8
Mainshaft.....	7-9
Countershaft.....	7-13
Replacing Side Door Bearings.....	7-15
Cleaning and Inspection.....	7-15
Assembly.....	7-15
Installing Side Door Bearings.....	7-15
Countershaft.....	7-16
Mainshaft.....	7-16
Shifter Cam/Shifter Forks.....	7-17
Installation.....	7-18

7.6 MAIN DRIVE GEAR AND BEARING

Removal.....	7-19
Cleaning and Inspection.....	7-20
Needle Bearing Replacement.....	7-20
Installation.....	7-22
Installing Main Drive Gear Bearing.....	7-23
Installing Main Drive Gear.....	7-23
Installing Main Drive Gear Seal.....	7-24

7.7 TRANSMISSION CASE

Removal.....	7-26
Installation.....	7-27
Disassembly.....	7-28
Shifter Arm Assembly.....	7-28
Cleaning and Inspection.....	7-28
Assembly.....	7-29
Countershaft Needle Bearing Replacement.....	7-29
Shifter Pawl Lever Assembly.....	7-29

ELECTRICAL

8.1 SPECIFICATIONS: ELECTRICAL

Specifications.....	8-1
---------------------	-----

8.2 ELECTRICAL CADDY

Removal.....	8-2
Installation.....	8-2

8.3 ELECTRONIC CONTROL MODULE (ECM)

General.....	8-4
Replacement.....	8-4

TABLE OF CONTENTS

8.4 SPARK PLUG CABLES

Removal.....	8-5
Installation.....	8-5

8.5 VOLTAGE REGULATOR

Removal.....	8-6
Installation.....	8-6

8.6 FUSES AND RELAYS

General.....	8-7
Removal and Installation.....	8-7
Relays.....	8-7
Fuses.....	8-7

8.7 IGNITION SWITCH/FORK LOCK

General.....	8-8
FXD, FXDL, FXDB.....	8-8
Removal.....	8-8
Installation.....	8-9
FXDWG, FXDC, FXDF Models (Ignition Switch Only).....	8-11

8.8 BATTERY TRAY AND BATTERY CABLES

Battery Tray.....	8-12
Removal.....	8-12
Installation.....	8-12
Battery Cables.....	8-13
Routing.....	8-13

8.9 HEADLAMP

General.....	8-14
Bulb Removal.....	8-14
Single Bulb Headlamp.....	8-14
Dual Bulb Headlamp.....	8-15
Bulb Installation.....	8-16
Headlamp Assembly Removal.....	8-16
Headlamp Assembly Installation.....	8-16

8.10 TAIL LAMP

General.....	8-17
Tail Lamp Bulb Replacement: Standard Style.....	8-17
Base Replacement.....	8-17

8.11 TURN SIGNALS AND RUNNING LIGHTS

Bulb Replacement: Bullet Style.....	8-19
Front Lamp Housing Replacement.....	8-19
Rear Lamp Housing Replacement.....	8-20

8.12 TURN SIGNAL AND SECURITY MODULE (TSM/TSSM/HFSM)

Removal.....	8-23
Installation.....	8-23

8.13 CRANK POSITION SENSOR (CKP)

General.....	8-25
Removal.....	8-25
Installation.....	8-25

8.14 ALTERNATOR AND STATOR

Removal/Disassembly.....	8-26
Assembly/Installation.....	8-26

8.15 FUEL GAUGE

General.....	8-27
All But FXD Models.....	8-27
Removal.....	8-27
Installation.....	8-27
FXD Models.....	8-27
Console Removal.....	8-27
Gauge Removal.....	8-29
Gauge Installation.....	8-29
Console Installation.....	8-29

8.16 FUEL GAUGE SENDER

Removal.....	8-31
Installation.....	8-32

8.17 INSTRUMENTS: FXDWG/FXDC/FXDF

Removal.....	8-34
Speedometer.....	8-34
Installation.....	8-34
Speedometer.....	8-34

8.18 INSTRUMENTS: FXDL/FXDB

Removal.....	8-35
General.....	8-35
Speedometer.....	8-35
Tachometer.....	8-35
Installation.....	8-35
General.....	8-35
Speedometer.....	8-35
Tachometer.....	8-35

8.19 INSTRUMENTS: FXD

Removal.....	8-37
Installation.....	8-37

8.20 VEHICLE SPEED SENSOR (VSS)

General.....	8-38
Removal.....	8-38
Installation.....	8-38

8.21 INDICATOR LAMPS

General.....	8-39
Removal.....	8-39
FXDWG/FXDC/FXDF Models.....	8-39
FXDB Models.....	8-39
FXD Models.....	8-40
FXDL Models.....	8-40
Installation.....	8-40
FXDWG/ FXDC/FXDF Models.....	8-40
FXDB Models.....	8-41
FXD Models.....	8-41
FXDL Models.....	8-41

8.22 NEUTRAL SWITCH

General.....	8-42
Removal.....	8-42
Installation.....	8-42

8.23 OIL PRESSURE SWITCH

General.....	8-43
--------------	------

TABLE OF CONTENTS

Removal.....	8-43
Installation.....	8-43

8.24 REAR STOPLIGHT SWITCH

General.....	8-44
Removal.....	8-44
Installation.....	8-44

8.25 HORN

Inspection.....	8-45
Replacement.....	8-45

8.26 ACTIVE EXHAUST

General.....	8-46
Removal.....	8-46
Repair.....	8-46
Installation.....	8-46

8.27 MAIN WIRING HARNESS

General.....	8-48
Removal.....	8-48
Installation.....	8-50

8.28 HANDLEBAR SWITCH ASSEMBLIES

General.....	8-53
Repair Procedures.....	8-53

8.29 RIGHT HANDLEBAR SWITCH

Removal.....	8-54
Installation.....	8-54
Disassembly.....	8-56
Switch Repair/Replacement.....	8-57
Upper Housing Repair.....	8-57
Lower Housing Repair.....	8-57
Turn-Right Signal Switch.....	8-58
Front Stoplight Switch.....	8-58
Assembly.....	8-58

8.30 LEFT HANDLEBAR SWITCH

Removal.....	8-60
Installation.....	8-60
Disassembly.....	8-61
Switch Repair/Replacement.....	8-61
Upper Housing Repair.....	8-61
Lower Housing Repair.....	8-62
Turn-Left Signal Switch.....	8-62
Clutch Interlock Switch.....	8-62
Assembly.....	8-62

APPENDIX A CONNECTOR REPAIR

A.1 AMP 1-PLACE CONNECTORS

AMP 1-Place Connector Repair.....	A-1
General.....	A-1
Separating Pin and Socket Housings.....	A-1
Mating Pin and Socket Housings.....	A-1
Removing Socket Terminals.....	A-1
Installing Socket Terminal.....	A-1
Removing Pin Terminal.....	A-1
Installing Pin Terminal.....	A-2

A.2 AMP MULTILOCK CONNECTORS

AMP Multilock Connector Repair.....	A-3
General.....	A-3
Separating Pin and Socket Housings.....	A-3
Mating Pin and Socket Housings.....	A-3
Removing Terminals from Housing.....	A-3
Inserting Terminals into Housing.....	A-4
Preparing Wire Leads for Crimping.....	A-4
Crimping Terminals to Leads.....	A-5
Inspecting Crimped Terminals.....	A-6

A.3 AUTOFUSE ELECTRICAL CONNECTORS

Autofuse Connector Repair.....	A-7
General.....	A-7
Disassembly.....	A-7
Assembly.....	A-7

A.4 DELPHI CONNECTORS

Delphi Connector Repair.....	A-8
General.....	A-8
Separating Pin and Socket Housings.....	A-8
Mating Pin and Socket Housings.....	A-8
Removing Socket Terminals.....	A-8
Installing Socket Terminals.....	A-8

A.5 DELPHI MAXI FUSE HOUSING

Delphi Maxi-Fuse Housing Repair.....	A-10
General.....	A-10
Removing Maxi-Fuse.....	A-10
Installing Maxi-Fuse.....	A-10
Removing Socket Terminals.....	A-10
Installing Socket Terminals.....	A-10

A.6 DEUTSCH ELECTRICAL CONNECTORS

Deutsch Connector Repair.....	A-12
General.....	A-12
Separating Pin and Socket Housings.....	A-12
Mating Pin and Socket Housings.....	A-12
Removing Socket Terminals.....	A-12
Installing Socket Terminals.....	A-12
Removing Pin Terminals.....	A-14
Installing Pin Terminals.....	A-14
Crimping Terminals.....	A-15

A.7 DEUTSCH STANDARD TERMINAL REPAIR

Deutsch Standard Terminal Crimps.....	A-16
Preparing Wire Leads for Crimping.....	A-16
Crimping Terminal to Lead.....	A-16
Inspecting Crimps.....	A-16

A.8 DEUTSCH SOLID BARREL MINI TERMINAL REPAIR

Deutsch Solid Barrel Terminal Crimps.....	A-17
Preparing Wire Leads For Crimping.....	A-17
Adjusting Crimper Tool.....	A-17
Crimping a Barrel Contact To Wire Lead.....	A-17
Inspecting Crimps.....	A-17

TABLE OF CONTENTS

A.9 DEUTSCH MINI TERMINAL REPAIR

Deutsch Mini Terminal Crimps.....	A-19
Preparing Wire Leads for Crimping.....	A-19
Crimping a Mini Terminal to Wire Lead.....	A-19
Inspecting Crimps.....	A-19

A.10 MOLEX CONNECTORS

Molex Connector Repair.....	A-20
Separating Pin and Socket Housings.....	A-20
Mating Pin and Socket Housings.....	A-20
Removing Terminals.....	A-20
Installing Terminals.....	A-20
Crimp Terminal to Lead.....	A-21
Prepare Lead.....	A-21
Prepare Tool.....	A-21
Position Terminal in the Punch/Die.....	A-22
Insert Stripped Lead.....	A-22
Crimp Terminal to Lead.....	A-22
Inspect Crimp.....	A-23

A.11 PACKARD 150 METRI-PACK CONNECTORS

150 Metri-Pack Connector Repair.....	A-24
General.....	A-24
Separating Pin and Socket Housings.....	A-24
Mating Pin and Socket Housings.....	A-24
Removing Socket Terminal.....	A-24
Inserting Socket Terminal.....	A-24

A.12 PACKARD 280 METRI-PACK RELAY AND FUSE BLOCK CONNECTORS

Fuse Block Repair.....	A-26
Removing Socket Terminals.....	A-26
Installing Socket Terminals.....	A-26
Crimping Terminals.....	A-26

A.13 PACKARD 480 METRI-PACK CONNECTORS

480 Metri-Pack Connector Repair.....	A-27
General.....	A-27
Separating Pin and Socket Housings.....	A-27
Mating Pin and Socket Housings.....	A-27
Removing Socket Terminals.....	A-27
Installing Socket Terminals.....	A-27

A.14 PACKARD 630 METRI-PACK CONNECTORS

630 Metri-Pack Connector Repair.....	A-28
General.....	A-28
Separating Pin and Socket Housings.....	A-28
Mating Pin and Socket Housings.....	A-28
Removing Socket Terminal.....	A-28
Installing Socket Terminal.....	A-28

A.15 PACKARD METRI-PACK TERMINALS

Metri-Pack Terminal Crimps.....	A-29
Matching Terminal To Crimper.....	A-29
Preparing Wire Lead.....	A-29
Crimping Wire Core.....	A-29
Crimping Insulation/Seal.....	A-29

Inspecting Crimps.....	A-30
------------------------	------

A.16 PACKARD ECM CONNECTOR

Packard 100W Connector Repair.....	A-31
General.....	A-31
Separating Socket Housing From ECM.....	A-31
Mating Socket Housing To ECM.....	A-31
Removing Socket Terminal.....	A-31
Installing Socket Terminal.....	A-31
Crimping Terminals.....	A-31

A.17 PACKARD MICRO-64 CONNECTORS

Packard Micro-64 Connector Repair.....	A-33
General.....	A-33
Separating Pin and Socket Housings.....	A-33
Mating Pin and Socket Housings.....	A-33
Removing Terminal.....	A-33
Installing Terminal.....	A-33
Preparing Wire Leads for Crimping.....	A-34
Crimping Terminals.....	A-34
Inspecting Crimps.....	A-34

A.18 SEALED SPLICE CONNECTORS

Sealed Splice Connector Repair.....	A-36
General.....	A-36
Preparing Wire Leads.....	A-36
Splicing Wire Leads.....	A-36
Inspecting Seals.....	A-36

APPENDIX B WIRING

B.1 CONNECTORS

Connector Locations.....	B-1
Function/Location.....	B-1
Place and Color.....	B-1
Connector Number.....	B-1
Repair Instructions.....	B-1

B.2 WIRING DIAGRAMS

Wiring Diagram Information.....	B-3
Wire Color Codes.....	B-3
Wiring Diagram Symbols.....	B-3
2008 Dyna Wiring Diagrams.....	B-4

APPENDIX C CONVERSIONS

C.1 LENGTH CONVERSION

Conversion Table.....	C-1
-----------------------	-----

C.2 FLUID CONVERSION

United States System.....	C-2
Metric System.....	C-2
British Imperial System.....	C-2

C.3 TORQUE CONVERSION

United States System.....	C-3
Metric System.....	C-3

APPENDIX D GLOSSARY

D.1 GLOSSARY

Acronyms and Abbreviations.....D-1

REFERENCE MATERIAL

TOOLS.....I

TORQUE VALUES.....VII

INDEX.....XV

NOTES

Thank you so much for reading.
Please click the “Buy Now!”
button below to download the
complete manual.



After you pay.

You can download the most
perfect and complete manual in
the world immediately.

Our support email:

ebooklibonline@outlook.com