



DYNA[®] MODELS

2016 HARLEY-DAVIDSON[®] SERVICE MANUAL



2016 Harley-Davidson Dyna Models Service Manual

©2015 H-D.
ALL RIGHTS RESERVED
99481-16

Printed in the U.S.A.

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

MAINTENANCE

1.1 FASTENER TORQUE VALUES

Fastener Torque Values in this Chapter.....1-1

1.2 GENERAL

Servicing a New Motorcycle.....	1-3
Safe Operating Maintenance.....	1-3
Disposal and Recycling.....	1-3
Shop Practices.....	1-3
Repair Notes.....	1-3
Safety.....	1-3
Removing Parts.....	1-3
Cleaning.....	1-3
Disassembly and Assembly.....	1-4
Checking Torques on Fasteners.....	1-4
Magnetic Parts Trays.....	1-4
Repair and Replacement Procedures.....	1-4
Hardware and Threaded Parts.....	1-4
Threadlocking Agents.....	1-4
Wiring, Hoses and Lines.....	1-4
Instruments and Gauges.....	1-4
Bearings.....	1-4
Bushings.....	1-4
Gaskets.....	1-4
Lip-Type Seals.....	1-4
O-Rings.....	1-5
Gears.....	1-5
Shafts.....	1-5
Part Replacement.....	1-5
Cleaning.....	1-5
Protecting Rubber Parts.....	1-5
Cleaning Process.....	1-5
Rust or Corrosion Removal.....	1-5
Bearings.....	1-5
Tool Safety.....	1-5
Air Tools.....	1-5
Wrenches.....	1-5
Pliers/Cutters/Pry Bars.....	1-6
Hammers.....	1-6
Punches/Chisels.....	1-6
Screwdrivers.....	1-6
Ratchets and Handles.....	1-6
Sockets.....	1-6
Storage Units.....	1-6

1.3 FUEL AND OIL

Fuel.....	1-7
Gasoline Blends.....	1-7
Engine Lubrication.....	1-7
Winter Lubrication.....	1-8

1.4 MAINTENANCE SCHEDULE

General.....1-9

1.5 ENGINE OIL AND FILTER

Check Engine Oil Level.....	1-14
Oil Level Cold Check.....	1-14
Oil Level Hot Check.....	1-14
Changing Oil and Oil Filter.....	1-14

1.6 AIR CLEANER AND EXHAUST SYSTEM

Removal, All But HO103.....	1-16
Installation, All But HO103.....	1-17
Removal, HO103.....	1-17

Installation, HO103.....	1-18
Check Exhaust System Leakage.....	1-18
Exhaust System Leakage.....	1-18

1.7 TIRES AND WHEELS

Tires.....	1-19
Tire Replacement.....	1-19
Dunlop.....	1-20
Michelin.....	1-20
Wheel Bearings.....	1-21
Wheel Spokes.....	1-21
Identify Wheel Spoke Groups.....	1-21
Adjust Wheel Spokes.....	1-21

1.8 PRIMARY CHAINCASE LUBRICANT

General.....	1-23
Change Primary Chaincase Lubricant.....	1-23

1.9 TRANSMISSION LUBRICANT

Check Transmission Lubricant.....	1-25
Change Transmission Lubricant.....	1-25

1.10 CLUTCH

Adjustment.....	1-27
-----------------	------

1.11 DRIVE BELT AND SPROCKETS

General.....	1-29
Cleaning.....	1-29
Inspection.....	1-29
Sprockets.....	1-29
Drive Belt.....	1-29
Check Drive Belt Deflection.....	1-30
Adjusting Belt Deflection.....	1-31

1.12 THROTTLE CABLES

Cable Inspection and Lubrication.....	1-33
Cable Adjustment.....	1-33
Operation.....	1-33
Adjustment.....	1-33

1.13 CABLE AND CHASSIS LUBRICATION

General.....	1-35
Cables and Hand Levers.....	1-35
Jiffy Stand.....	1-35

1.14 BRAKES

Fluid Inspection.....	1-36
Rear Pedal Height.....	1-36
Inspect Brake Lines.....	1-36

1.15 BRAKE PADS AND DISCS

Inspection.....	1-38
Brake Pads.....	1-38
Brake Disc.....	1-38
Brake Pad Replacement.....	1-39
Rear Brake Caliper.....	1-39
Front Brake Caliper.....	1-39

1.16 SPARK PLUGS

Inspection.....	1-41
-----------------	------

1.17 STEERING HEAD BEARINGS

Adjustment.....	1-42
Bearing Adjustment (Measurement).....	1-42
Bearing Adjustment (Fall-Away).....	1-42

TABLE OF CONTENTS

Lubrication.....	1-43
1.18 BATTERY MAINTENANCE	
General.....	1-44
Cleaning and Inspection.....	1-45
Voltage Test.....	1-45
Charging Battery.....	1-45
Safety Precautions.....	1-45
Using a Battery Charger.....	1-45
Disconnection and Removal.....	1-46
Storage.....	1-47
Installation and Connection.....	1-47
1.19 ENGINE MOUNTS	
Inspection.....	1-48
1.20 HEADLAMP ALIGNMENT	
Headlamp Alignment.....	1-49
Headlamp Adjustment: All BUT FLD and FXDL.....	1-49
Headlamp Adjustment: FLD.....	1-50
Headlamp Adjustment: FXDL.....	1-50
1.21 SUSPENSION ADJUSTMENTS	
Shock Absorber Preload Adjustment.....	1-51
1.22 STORAGE	
General.....	1-52
Placing in Storage.....	1-52
Removal from Storage.....	1-52
1.23 TROUBLESHOOTING	
General.....	1-53
Engine.....	1-53
Starter Motor Does Not Operate or Does Not Turn Engine Over.....	1-53
Engine Turns Over But Does Not Start.....	1-53
Starts Hard.....	1-53
Starts But Runs Irregularly or Misses.....	1-53
Spark Plug Fouls Repeatedly.....	1-53
Pre-Ignition or Detonation (Knocks or Pings).....	1-53
Overheating.....	1-54
Valve Train Noise.....	1-54
Excessive Vibration.....	1-54
Check Engine Light Illuminates During Operation.....	1-54
Lubrication System.....	1-54
Oil Does Not Return To Oil Pan.....	1-54
Engine Uses Too Much Oil Or Smokes Excessively..	1-54
Engine Leaks Oil From Cases, Pushrods, Hoses, Etc.....	1-54
Low Oil Pressure.....	1-54
High Oil Pressure.....	1-54
Electrical System.....	1-54
Alternator Does Not Charge.....	1-54
Alternator Charge Rate Is Below Normal.....	1-54
Speedometer Operates Erratically.....	1-55
Transmission.....	1-55
Shifts Hard.....	1-55
Jumps Out Of Gear.....	1-55
Clutch Slips.....	1-55
Clutch Drags Or Does Not Release.....	1-55
Clutch Chatters.....	1-55

Handling.....	1-55
Irregularities.....	1-55
Brakes.....	1-55
Brake Does Not Hold Normally.....	1-55

CHASSIS

2.1 FASTENER TORQUE VALUES

Fastener Torque Values in this Chapter.....	2-1
---	-----

2.2 SPECIFICATIONS

Specifications.....	2-6
Chassis Specifications.....	2-6
Tire Specifications.....	2-7

2.3 VEHICLE IDENTIFICATION NUMBER (VIN)

Vehicle Identification Number.....	2-9
------------------------------------	-----

2.4 FRONT WHEEL

Removal.....	2-11
Disassembly.....	2-11
Cast Wheel.....	2-11
Cast Wheel, Dual Brakes.....	2-11
Laced Wheel.....	2-11
Cleaning and Inspection.....	2-15
Assembly.....	2-16
Cast Wheel.....	2-16
Laced Wheel.....	2-16
Installation.....	2-16

2.5 REAR WHEEL

Removal.....	2-18
Disassembly.....	2-18
Cleaning and Inspection.....	2-19
Assembly.....	2-20
Installation.....	2-20

2.6 SEALED WHEEL BEARINGS

Inspect.....	2-22
Removal.....	2-22
Installation.....	2-24

2.7 WHEEL LACING

Wheel Lacing: Angle Flange Hub.....	2-26
Wheel Lacing: Straight Flange Hub, Single Hole Circle....	2-27
Wheel Lacing: Straight Flange Hub, Dual Hole Circle.....	2-29

2.8 CHECKING AND TRUING WHEELS

General.....	2-31
Checking Wheel Runout.....	2-31
Checking Radial Runout.....	2-31
Checking Lateral Runout.....	2-31
Laced Wheel Rim Offset.....	2-32
True Laced Wheels.....	2-35
Adjust Radial Runout.....	2-35
Adjust Lateral Runout.....	2-35

2.9 VEHICLE ALIGNMENT

Inspection.....	2-37
-----------------	------

2.10 FRONT BRAKE MASTER CYLINDER

General.....2-39
 Removal and Disassembly.....2-39
 Cleaning and Inspection.....2-41
 Assembly and Installation.....2-41

2.11 FRONT BRAKE CALIPER

Removal.....2-43
 Disassembly.....2-43
 Cleaning, Inspection and Repair.....2-45
 Assembly.....2-46
 Installation.....2-47

2.12 REAR BRAKE MASTER CYLINDER

Removal.....2-49
 Disassembly.....2-51
 Cleaning and Inspection.....2-52
 Assembly.....2-52
 Installation.....2-52

2.13 REAR BRAKE CALIPER

Removal.....2-54
 Disassembly.....2-54
 Cleaning, Inspection and Repair.....2-56
 Assembly.....2-56
 Installation.....2-57

2.14 BRAKE LINES

Front Master Cylinder to Front Caliper Line Assembly.....2-58
 Removal.....2-58
 Installation.....2-58
 ABS Module to Front Manifold Brake Lines.....2-58
 Removal.....2-58
 Installation.....2-60
 Rear Master Cylinder to ABS Module.....2-61
 Removal.....2-61
 Installation.....2-61
 ABS Module to Rear Brake Caliper.....2-63
 Removal.....2-63
 Installation.....2-63

2.15 ABS MODULE (EHCU)

General.....2-65
 Electro Hydraulic Control Unit (EHCU).....2-65
 Removal.....2-65
 Installation.....2-67

2.16 BLEEDING BRAKES

General.....2-68
 Procedure.....2-68

2.17 TIRES

General.....2-70
 Remove.....2-70
 Clean, Inspect and Repair.....2-70
 Installation.....2-71
 Tube Type Tires.....2-71
 Tubeless Tires.....2-71
 Check Tire Runout.....2-72
 Lateral Runout.....2-72
 Radial Runout.....2-72

Balance Wheel.....2-72
 Static vs Dynamic.....2-72
 Weights.....2-73

2.18 FRONT FORK

Check For Oil Leak.....2-74
 Fork Oil Seals.....2-74
 Check Oil Leak.....2-74
 Removal.....2-74
 Disassembly: All But FLD Left Side.....2-74
 Disassembly: Cartridge Fork (FLD, Left Side).....2-77
 Cleaning and Inspection.....2-79
 Assembly: All But FLD Left Side.....2-80
 Assembly: Cartridge Fork (FLD, Left Side).....2-81
 Installation.....2-83

2.19 STEERING HEAD

Removal: All But FLD.....2-85
 Removal: FLD.....2-85
 Inspection.....2-86
 Disassembly.....2-86
 Steering Head Bearing Race Removal2-86
 Assembly.....2-86
 Installation: All but FLD.....2-86
 Installation: FLD.....2-87

2.20 BELT GUARD AND DEBRIS DEFLECTOR

Belt Guard Removal.....2-89
 Belt Guard Installation.....2-89
 Debris Deflector Removal.....2-89
 Debris Deflector Installation.....2-89

2.21 THROTTLE CONTROL

Removal/Disassembly.....2-91
 Cleaning and Inspection.....2-91
 Assembly/Installation.....2-91
 Throttle Cable Routing.....2-92

2.22 REAR SHOCK ABSORBERS

General.....2-93
 Removal.....2-93
 Inspection.....2-93
 Installation.....2-93

2.23 REAR FORK

Removal.....2-94
 Disassembly.....2-94
 Cleaning and Inspection.....2-95
 Assembly.....2-95
 Installation.....2-95

2.24 CLUTCH CONTROL

Removal.....2-96
 Installation.....2-96

2.25 HANDLEBAR: FLD

Removal.....2-97
 Installation.....2-97
 Left Hand Grip.....2-98
 Removal.....2-98

TABLE OF CONTENTS

Installation.....	2-98
2.26 HANDLEBAR: FXDB, FXDBC, FXDBP, FXDF AND FXDWG	
Removal.....	2-99
FXDB, FXDBC, FXDBP.....	2-99
FXDF and FXDWG.....	2-100
Installation.....	2-101
2.27 HANDLEBAR: FXDL	
Removal.....	2-104
Installation.....	2-104
Handlebar and Riser Adjustment.....	2-106
2.28 FRONT FENDER	
Removal.....	2-107
Installation.....	2-107
2.29 REAR FENDER	
General.....	2-108
Removal.....	2-108
Tail Lamp/Turn Signal Harness Routing.....	2-108
Installation.....	2-108
FXDL.....	2-111
Removal.....	2-111
Installation.....	2-111
FXDB, FXDBC, FXDBP.....	2-111
Removal.....	2-111
Installation.....	2-111
FXDWG.....	2-112
Removal.....	2-112
Sissy Bar.....	2-113
Installation.....	2-113
FLD.....	2-114
Removal.....	2-114
Disassembly.....	2-114
Assembly.....	2-114
Installation.....	2-114
FXDF.....	2-115
Removal.....	2-115
Installation.....	2-115
2.30 SEAT	
Removal.....	2-117
Seat and Seat Strap: All But FXDWG.....	2-117
Seat and Seat Strap: FXDWG.....	2-117
Installation.....	2-118
Seat and Seat Strap: All But FXDWG.....	2-118
Seat and Seat Strap: FXDWG.....	2-118
Lumbar Pad: FXDL.....	2-119
Removal.....	2-119
Installation.....	2-119
2.31 FOOTBOARDS AND FOOTRESTS	
Rider Footboards.....	2-120
Removal.....	2-120
Disassembly.....	2-120
Assembly.....	2-120
Installation.....	2-120
Rider Footrests: Mid Controls.....	2-121
Removal.....	2-121

Installation.....	2-121
Rider Footrests: Forward Controls.....	2-122
Removal.....	2-122
Installation.....	2-122
Passenger Footrests: All But FXDB.....	2-122
Removal.....	2-122
Installation.....	2-122

2.32 HEADLAMP NACELLE: FLD

Upper and Lower Nacelle.....	2-124
Removal.....	2-124
Installation.....	2-124

2.33 WINDSHIELD: FLD

Windshield.....	2-125
Removal.....	2-125
Installation.....	2-125
Windshield Window.....	2-125
Removal.....	2-125
Installation.....	2-127

2.34 SADDLEBAGS: FLD

Saddlebag.....	2-128
Removal.....	2-128
Installation.....	2-128
Disassembly.....	2-128
Assembly.....	2-129
Saddlebag Lid.....	2-130
Seal.....	2-130
Disassembly.....	2-131
Assembly.....	2-131

2.35 JIFFY STAND

Cleaning.....	2-133
Jiffy Stand Sensor: HDI Models.....	2-135
Removal.....	2-135
Installation.....	2-135

2.36 FORK LOCK

Removal.....	2-137
Installation.....	2-137

2.37 ENGINE MOUNTS

Removal.....	2-139
Front Isolator.....	2-139
Rear Isolator.....	2-139
Installation.....	2-139
Front Isolator.....	2-139
Rear Isolator.....	2-139

2.38 SAREE GUARD: INDIA MODELS

Replacement.....	2-141
Removal.....	2-141
Installation.....	2-141

2.39 MEDALLIONS, BADGES AND TANK EMBLEMS

Removal.....	2-142
Installation.....	2-142

ENGINE

3.1 FASTENER TORQUE VALUES

Fastener Torque Values in this Chapter.....3-1

3.2 SPECIFICATIONS

Specifications.....3-3

3.3 SERVICE WEAR LIMITS

General.....3-5

3.4 ENGINE OIL FLOW

Oil Feed.....3-7

Top End.....3-7

Bottom End.....3-9

Oil Return.....3-11

3.5 OIL PUMP OPERATION

General.....3-12

Operation.....3-12

3.6 BREATHER OPERATION

General.....3-14

3.7 OIL PRESSURE

Oil Pressure Indicator Lamp.....3-15

Checking Oil Pressure.....3-15

3.8 TROUBLESHOOTING

Diagnosing Valve Train Noise.....3-17

Compression Test.....3-17

Cylinder Leakdown Test.....3-18

Diagnosing Smoking Engine or High Oil Consumption.....3-18

 Check Before Cylinder Head Removal:.....3-18

 Check After Cylinder Head Removal:.....3-18

3.9 HOW TO USE THIS SECTION

Top End Repair.....3-19

Bottom End Repair.....3-19

Typical Symptoms.....3-19

3.10 TOP END SERVICE

Engine in Chassis.....3-20

Engine Removed from Chassis.....3-21

3.11 CAM COMPARTMENT SERVICE

Replace Camshaft.....3-22

Engine Removed From Chassis.....3-23

3.12 STRIPPING MOTORCYCLE FOR SERVICE

Procedure.....3-24

 Cam Compartment Service Only.....3-24

 Complete Top End Service.....3-24

3.13 ASSEMBLING MOTORCYCLE AFTER SERVICE

Procedure.....3-25

After Complete Top End Service.....3-25

After Cam Compartment Service Only.....3-25

3.14 REMOVING ENGINE FROM CHASSIS

Procedure.....3-26

3.15 INSTALLING ENGINE IN CHASSIS

Procedure.....3-27

3.16 TOP END OVERHAUL: DISASSEMBLY

General.....3-29

Rocker Covers.....3-29

Rocker Arm Support Plate.....3-29

Pushrods, Lifters and Covers.....3-31

Cylinder Head.....3-31

Cylinder.....3-32

Piston.....3-33

3.17 BREATHER ASSEMBLY

Disassembly.....3-35

Cleaning and Inspection.....3-35

Assembly.....3-35

3.18 ROCKER ARM SUPPORT PLATE

Disassembly.....3-36

Cleaning, Inspection and Repair.....3-36

 Inspection.....3-36

 Rocker Shaft Fit.....3-36

 Rocker Arm Shaft to Bushing.....3-37

 Replace Rocker Arm Bushings.....3-37

Assembly.....3-38

3.19 PUSHRODS, LIFTERS AND COVERS

Disassembly.....3-39

Cleaning and General Inspection.....3-39

Inspect Lifters.....3-40

Assemble.....3-40

3.20 CYLINDER HEAD

Determining Service.....3-42

Disassembly.....3-42

Cleaning.....3-43

Inspection.....3-43

 Cylinder Head.....3-43

 Valve Guides.....3-44

 Valves.....3-44

 Valve Springs.....3-44

 Tapered Keepers.....3-44

 Valve Seats.....3-44

Valve Guide Replacement.....3-44

 Removal.....3-44

 Installation.....3-45

Valve and Seat Refacing.....3-48

Assembly.....3-50

3.21 CYLINDER

Cleaning.....3-52

Inspection.....3-52

Deglazing Cylinder.....3-54

Boring and Honing Cylinder.....3-54

TABLE OF CONTENTS

3.22 PISTON

Disassembly.....	3-56
Piston Rings.....	3-56
Cleaning.....	3-56
Inspection.....	3-56
Assembly.....	3-58
Checking Piston Ring Gap.....	3-58
Installing Piston Rings.....	3-58

3.23 TOP END OVERHAUL: ASSEMBLY

General.....	3-60
Piston.....	3-60
Cylinder.....	3-61
Cylinder Head.....	3-63
Pushrods, Lifters and Covers.....	3-66
Rocker Arm Support Plate.....	3-67
Breather and Rocker Cover.....	3-68

3.24 CAM COMPARTMENT AND COMPONENTS

Cam Support Plate and Cover Removal.....	3-70
Prepare Engine.....	3-70
Cam Chain and Sprockets Removal.....	3-70
Cam Support Plate Removal.....	3-71
Cam Support Plate Cleaning and Inspection.....	3-72
Oil Pressure Relief Valve.....	3-72
Cam Support Plate.....	3-72
Camshafts.....	3-72
Removal.....	3-72
Installation.....	3-73
Oil Pressure Relief Valve.....	3-74
Removal.....	3-74
Inspection.....	3-75
Installation.....	3-75
Cam Needle Bearings.....	3-75
Removal.....	3-75
Installation.....	3-77
Cam Support Plate and Cover Installation.....	3-78

3.25 OIL PUMP

Removal.....	3-83
Cleaning and Inspection.....	3-83
Installation.....	3-84

3.26 CRANKCASE DISASSEMBLY AND REPAIR

Crankcase Disassembly.....	3-85
Cleaning and Inspection.....	3-85
Right Crankcase Half.....	3-86
Main Bearing Removal.....	3-86
Main Bearing Installation.....	3-86
Piston Jets Removal.....	3-87
Piston Jets Installation.....	3-87
Left Crankcase Half.....	3-87
Main Bearing Removal.....	3-87
Main Bearing Installation.....	3-88
Sprocket Shaft Bearing Inner Race.....	3-89
Removal.....	3-89
Installation.....	3-90
Cylinder Studs.....	3-92
Removal.....	3-92

Installation.....	3-92
Pipe Plug and Oil Fittings.....	3-92
Removal.....	3-92
Installation.....	3-92

3.27 FLYWHEEL AND CONNECTING RODS

Symptoms.....	3-93
Overview.....	3-93
No Oil Pressure.....	3-93
Vibration.....	3-93
Inspection.....	3-93
Measuring Crankshaft Runout.....	3-93
Crankshaft Installed.....	3-93
Crankshaft Removed.....	3-94

3.28 CRANKCASE ASSEMBLY

Crankcase Assembly.....	3-95
-------------------------	------

3.29 OIL PAN

Removal.....	3-97
Installation.....	3-97

FUEL SYSTEM

4.1 FASTENER TORQUE VALUES

Fastener Torque Values in this Chapter.....	4-1
---	-----

4.2 SPECIFICATIONS: FUEL SYSTEM

Specifications.....	4-4
---------------------	-----

4.3 AIR CLEANER ASSEMBLY

Removal, All But HO103.....	4-5
Installation, All But HO103.....	4-6
Removal, HO103.....	4-6
Installation, HO103.....	4-7
Backplate Assembly: HDI Models.....	4-8

4.4 FUEL TANK

General.....	4-9
Removal.....	4-9
Cleaning and Inspection.....	4-10
Installation.....	4-11
Vapor Valve.....	4-11

4.5 THROTTLE POSITION SENSOR (TPS)

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

4.6 INTAKE AIR TEMPERATURE SENSOR (IAT)

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

4.7 ENGINE TEMPERATURE SENSOR (ET)

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

4.8 INDUCTION MODULE

Removal.....4-16
 Installation.....4-17

4.9 IDLE AIR CONTROL (IAC)

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

4.10 MANIFOLD ABSOLUTE PRESSURE SENSOR (MAP)

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

4.11 OXYGEN SENSOR

General.....4-20
 Removal.....4-20
 Installation.....4-20

4.12 FUEL INJECTORS

General.....4-21
 Removal.....4-21
 Installation.....4-21

4.13 FUEL PUMP

General.....4-23
 Removal.....4-23
 Disassembly and Assembly.....4-25
 Fuel Filter.....4-25
 Regulator.....4-25
 Inlet Sock.....4-26
 Fuel Pump.....4-27
 Installation.....4-27

4.14 FUEL PRESSURE TEST

General.....4-30
 Testing.....4-30

4.15 EXHAUST SYSTEM

Removal: FXDB, FXDBC and FXDBP.....4-32
 Disassembly: FXDB, FXDBC and FXDBP.....4-33
 Assembly: FXDB, FXDBC and FXDBP.....4-34
 Installation: FXDB, FXDBC and FXDBP.....4-34
 Removal: FXDF and FXDWG.....4-35
 Installation: FXDF and FXDWG.....4-38
 Removal: FLD.....4-39
 Installation: FLD.....4-41
 Removal: FXDL.....4-41
 Installation: FXDL.....4-43

4.16 INTAKE LEAK TEST

General.....4-44
 Leak Tester.....4-44
 Parts List.....4-44
 Assemble Tester.....4-44
 Adjust Tester.....4-44
 Procedure.....4-44

4.17 EVAPORATIVE EMISSIONS CONTROL

General.....4-46
 Charcoal Canister.....4-48
 Removal.....4-48
 Installation.....4-48

DRIVE

5.1 FASTENER TORQUE VALUES

Fastener Torque Values in this Chapter.....5-1

5.2 SPECIFICATIONS: DRIVE

Specifications.....5-2

5.3 PRIMARY CHAINCASE COVER

General.....5-3
 Removal.....5-3
 Installation.....5-3

5.4 DRIVE COMPONENTS

Removal.....5-5
 Installation.....5-7

5.5 PRIMARY CHAINCASE HOUSING

Removal.....5-10
 Inspection.....5-10
 Mainshaft Bearing and Seal.....5-10
 Removal.....5-10
 Installation.....5-10
 Mainshaft Bearing Inner Race.....5-11
 Removal.....5-11
 Installation.....5-11
 Shifter Shaft Bushing.....5-12
 Installation.....5-12

5.6 CLUTCH

Removal and Installation.....5-14
 Clutch Pack Only.....5-14
 Partial Disassembly.....5-14
 Cleaning And Inspection.....5-14
 Assembly.....5-15
 Clutch Pack and Bearing.....5-16
 Complete Disassembly.....5-16
 Assembly.....5-17

5.7 TRANSMISSION SPROCKET

Removal.....5-18
 Cleaning and Inspection.....5-19
 Installation.....5-19

5.8 DRIVE BELT

Removal.....5-21
 Installation.....5-21

TRANSMISSION

6.1 FASTENER TORQUE VALUES

Fastener Torque Values in this Chapter.....6-1

TABLE OF CONTENTS

6.2 SPECIFICATIONS: TRANSMISSION

Specifications.....	6-2
Service Wear Limits.....	6-2

6.3 TRANSMISSION

Power Flow.....	6-4
Neutral.....	6-4
First Gear.....	6-4
Second Gear.....	6-4
Third Gear.....	6-4
Fourth Gear.....	6-4
Fifth Gear.....	6-4
Sixth Gear.....	6-4

6.4 SHIFTER LINKAGE

Shifter Rod Adjustment.....	6-6
Forward Control Shifter Adjustment.....	6-6
Mid-Control Shifter Adjustment.....	6-6

6.5 CLUTCH RELEASE COVER

Removal and Disassembly.....	6-7
Cleaning and Inspection.....	6-7
Assembly and Installation.....	6-8

6.6 TRANSMISSION ASSEMBLY

Removal.....	6-9
Disassembly.....	6-10
Shifter Cam/Shifter Forks.....	6-10
Mainshaft.....	6-12
Countershaft.....	6-14
Removing Bearing Housing Bearings.....	6-15
Cleaning and Inspection.....	6-16
Assembly.....	6-16
Installing Bearing Housing Bearings.....	6-16
Countershaft.....	6-16
Mainshaft.....	6-17
Shifter Cam/Shifter Forks.....	6-17
Installation.....	6-19

6.7 MAIN DRIVE GEAR AND BEARING

Removal.....	6-22
Cleaning and Inspection.....	6-23
Needle Bearing Replacement.....	6-24
Installation.....	6-25
Installing Main Drive Gear Bearing.....	6-25
Installing Main Drive Gear.....	6-26
Installing Main Drive Gear Large Seal.....	6-26

6.8 TRANSMISSION CASE

Removal.....	6-29
Installation.....	6-29
Disassembly.....	6-30
Shifter Arm Assembly.....	6-30
Cleaning and Inspection.....	6-30
Assembly.....	6-31
Countershaft Needle Bearing Replacement.....	6-31
Shifter Pawl Lever Assembly.....	6-31

ELECTRICAL

7.1 FASTENER TORQUE VALUES

Fastener Torque Values in this Chapter.....	7-1
---	-----

7.2 SPECIFICATIONS: ELECTRICAL

Specifications.....	7-4
---------------------	-----

7.3 ELECTRICAL CADDY

Removal.....	7-5
Installation.....	7-7

7.4 ELECTRONIC CONTROL MODULE (ECM)

General.....	7-8
Replacement.....	7-8
Removal.....	7-8
Installation.....	7-8

7.5 BODY CONTROL MODULE (BCM)

General.....	7-9
Removal.....	7-9
Installation.....	7-10

7.6 SECURITY SIREN

Removal.....	7-11
Installation.....	7-11

7.7 SPARK PLUG CABLES

Inspect Spark Plug Cables.....	7-12
Removal.....	7-12
Installation.....	7-12

7.8 FUSES

General.....	7-13
Replacement.....	7-13

7.9 IGNITION SWITCH

Removal.....	7-14
All but FXDL.....	7-14
FXDL.....	7-15
Installation.....	7-16
All but FXDL.....	7-16
FXDL.....	7-16

7.10 BATTERY TRAY AND BATTERY CABLES

Battery Tray.....	7-17
Removal.....	7-17
Installation.....	7-17
Battery Cables.....	7-18
Routing.....	7-18

7.11 STARTER

General.....	7-20
Removal.....	7-20
Drive Assembly.....	7-20
Disassembly.....	7-20
Inspection.....	7-21
Assembly.....	7-21

Solenoid.....7-21
 Remove Cover and Plunger.....7-21
 Short Post Contact: Starter.....7-22
 Long Post Contact: Battery Positive.....7-22
 Install Plunger and Cover.....7-23
 Installation.....7-23

7.12 HEADLAMP

General.....7-24
 Bulb Removal: All But FLD.....7-24
 Single Bulb Headlamp.....7-24
 Dual Bulb Headlamp.....7-25
 Bulb Installation: All But FLD.....7-26
 Headlamp Assembly: All But FLD and FXDL.....7-26
 Removal.....7-26
 Installation.....7-26
 Headlamp Assembly: FXDL.....7-26
 Removal.....7-26
 Installation.....7-26
 Headlamp Visor: FXDL.....7-27
 Removal.....7-27
 Installation.....7-27
 Headlamp: FLD.....7-28
 Removal.....7-28
 Bulb Replacement.....7-29
 Installation.....7-30

7.13 TAIL LAMP

General.....7-31
 Tail Lamp Bulb Replacement: FLD and FXDL.....7-31
 Base Replacement: FLD and FXDL.....7-31
 Base Replacement: FXDWG/HDI and Canada.....7-33
 Tail Lamp Replacement: FXDF.....7-34
 Tail Lamp Removal.....7-34
 Tail Lamp Installation.....7-34
 License Plate Lamp Replacement.....7-34

7.14 TURN SIGNALS

Turn Signal Bulb Replacement: Bullet Style.....7-36
 Front Lamp Housing Replacement: All But FLD.....7-36
 Rear Lamp Housing Replacement: All But FLD.....7-38
 Front Turn Signal Lamps: FLD.....7-40
 Removal.....7-40
 Installation.....7-40
 Rear Turn Signal Lamps and Bracket: FLD.....7-41
 Removal.....7-41
 Installation.....7-41
 Rear Turn Signal Reflector/Isolator Repair: FLD.....7-41
 Removal.....7-41
 Installation.....7-41

7.15 CRANK POSITION SENSOR (CKP)

General.....7-43
 Removal.....7-43
 Installation.....7-43

7.16 AUTOMATIC COMPRESSION RELEASE (ACR)

General.....7-44
 Removal.....7-44
 Installation.....7-44

7.17 VOLTAGE REGULATOR

Removal.....7-46
 Installation.....7-46

7.18 ALTERNATOR

Removal.....7-47
 Cleaning and Inspection.....7-47
 Installation.....7-47

7.19 FUEL GAUGE

General.....7-49
 Removal.....7-49

7.20 FUEL GAUGE SENDER

Removal.....7-50
 Installation.....7-51

7.21 INSTRUMENTS: FXDF AND FLD

Speedometer.....7-53
 Removal.....7-53
 Installation.....7-53

7.22 INSTRUMENTS: FXDB, FXDBC, FXDBP AND FXDWG

Removal.....7-54
 Installation.....7-54

7.23 INSTRUMENTS: FXDL

Removal.....7-56
 Installation.....7-56

7.24 VEHICLE SPEED SENSOR (VSS)

General.....7-57
 Removal.....7-57
 Installation.....7-57

7.25 WHEEL SPEED SENSORS

Front Wheel Speed Sensor (WSS).....7-58
 Removal.....7-58
 Installation.....7-58
 Rear Wheel Speed Sensor (WSS).....7-59
 Removal.....7-59
 Installation.....7-60

7.26 INDICATOR LAMPS

Removal.....7-62
 FLD.....7-62
 FXDB, FXDBC, FXDBP, FXDWG and FXDF.....7-62
 Installation.....7-63
 FLD.....7-63
 FXDB, FXDBC, FXDBP, FXDWG and FXDF.....7-63

7.27 NEUTRAL SWITCH

General.....7-64
 Removal.....7-64
 Installation.....7-64

7.28 OIL PRESSURE SWITCH

General.....7-65

TABLE OF CONTENTS

Removal.....	7-65
Installation.....	7-65

7.29 REAR STOPLAMP SWITCH

General.....	7-66
Removal.....	7-66
Installation.....	7-66

7.30 HORN

Inspection.....	7-67
Replacement: All But FXDL.....	7-67
Replacement: FXDL.....	7-68

7.31 ACTIVE EXHAUST: HDI

General.....	7-69
Removal.....	7-69
Repair.....	7-69
Installation.....	7-69

7.32 MAIN WIRING HARNESS

General.....	7-71
Removal.....	7-71
Installation.....	7-73

7.33 HANDLEBAR CONTROL MODULES

General.....	7-77
Repair Procedures.....	7-77

7.34 LEFT HANDLEBAR CONTROL MODULE

Removal.....	7-78
Clutch Switch Replacement.....	7-78
Installation.....	7-78

7.35 RIGHT HANDLEBAR CONTROL MODULE

Removal.....	7-80
Front Brake Switch Replacement.....	7-81
Installation.....	7-81

7.36 H-DSSS MAINTENANCE

Fob Battery.....	7-83
Battery Replacement Schedule.....	7-83
Battery Replacement.....	7-83
Smart Siren (If Installed).....	7-83
Battery Replacement Schedule.....	7-83
Battery Replacement.....	7-83

7.37 PERSONAL IDENTIFICATION NUMBER (PIN)

General.....	7-84
--------------	------

Changing The PIN.....	7-84
Modifying an Existing PIN.....	7-84

7.38 H-DSSS ACTUATION

Sidecar Configuration.....	7-86
Activation.....	7-86
Fob Assignment.....	7-86

APPENDIX A WIRING

A.1 CONNECTORS

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

A.2 WIRING DIAGRAMS

Wiring Diagram Information.....	A-4
Wire Color Codes.....	A-4
Wiring Diagram Symbols.....	A-4
2016 Dyna Wiring Diagrams.....	A-6

APPENDIX B REFERENCE

B.1 LENGTH CONVERSION

Conversion Table.....	B-1
-----------------------	-----

B.2 FLUID CONVERSION

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

B.3 TORQUE CONVERSION

United States System.....	B-3
Metric System.....	B-3

B.4 GLOSSARY

Acronyms and Abbreviations.....	B-4
---------------------------------	-----

REFERENCE MATERIAL

TOOLS.....	I
------------	---

TORQUE VALUES.....	VII
--------------------	-----

INDEX.....	XXI
------------	-----

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