

AMENDMENT

On the 2/1 edition, page X (QRD) and page 538 have been changed to note the engine oil capacity on 2008-2009 models is 2.8 qt (2.65 L). On 2004-2007 models the capacity is 3.6 qt. (3.4 L).

This Harley-Davidson Sportster XL Manual is 616 pages.

QUICK REFERENCE DATA

CHAPTER ONE - GENERAL INFORMATION

Manual organization / Warnings, cautions and notes / Safety / Serial numbers / Fasteners / Shop supplies / Tools / Measuring tools / Electrical system fundamentals / Basic service methods / Storage / Specifications

CHAPTER TWO - TROUBLESHOOTING

Engine operating requirements / Engine starting / Engine performance / Starting system / Charging system / Ignition system / Electronic diagnostic system / Fuel system / Engine noises / Engine lubrication / Clutch / Transmission / Excessive vibration / Suspension and steering / Brakes / Specifications

CHAPTER THREE - LUBRICATION, MAINTENANCE AND TUNE-UP

Fuel type / Pre-ride inspection / Tires and wheels / Periodic lubrication / Periodic maintenance / Tune-up / Air filter element / Engine compression test / Spark plugs / Idle speed adjustment / Specifications

CHAPTER FOUR - ENGINE TOP END

Outer rocker covers / Inner rocker covers / Cylinder head / Valves and valve components / Pushrods and covers / Cylinder / Pistons and piston rings / Oil tank and oil hoses / Specifications

CHAPTER FIVE - ENGINE LOWER END

Engine removal installation / Valve tappets / Gearcase cover and timing gears / Oil pump / Oil filter mount / Crankcase and crankshaft / Engine mounting system / Specifications

CHAPTER SIX - PRIMARY DRIVE, CLUTCH AND EXTERNAL SHIFT MECHANISM

Primary drive cover / Clutch release mechanism / Primary chain adjuster / Primary drive/clutch / Clutch cable / Shift lever assembly / Shift shaft / Specifications

CHAPTER SEVEN - TRANSMISSION AND INTERNAL SHIFT MECHANISM

Internal gearshift mechanism / Transmission / Mainshaft / (2004-2005 models) / Countershaft / (2004-2005 models) / Transmission / (2006-on models) / Mainshaft / (2006-on models) / Countershaft / (2006-on models) / Main drive gear / Crankcase bearing / Transmission drive sprocket / Specifications

CHAPTER EIGHT - FUEL, EMISSION CONTROL AND EXHAUST SYSTEMS

Air filter backplate / Carburetor / Intake manifold / Fuel hose and clamps / Throttle and idle cables / Starting enrichment valve (choke) / cable replacement / Fuel tank / Fuel shutoff valve / Exhaust system / Evaporative emission control system / (California models) / Specifications

CHAPTER NINE - ELECTRICAL SYSTEM

Electrical component replacement / Battery / Charging system / Alternator / Ignition system / Starter / Starter solenoid / Lighting system / Switches / Horn / Starter relay switch / Speedometer / Tachometer / Vehicle speed sensor / Turn signal module (TSM) and turn / signal security module

(TSSM) / Security system / Fuses / Maxi-fuse / Electrical connectors / Specifications

CHAPTER TEN - WHEELS, TIRES AND DRIVE BELT

Motorcycle stands / Front wheel / Rear wheel / Front and rear hubs / Driven sprocket assembly / Drive sprocket / Drive belt / Wheel inspection / Laced wheels / Disc and cast wheels / Wheel balance / Tires / Specifications

CHAPTER ELEVEN - FRONT SUSPENSION AND STEERING

Handlebar / Front fork / Steering head and stem / Steering head bearing race / Steering play adjustment / Specifications

CHAPTER TWELVE - REAR SUSPENSION

Shock absorbers / Swing arm / Specifications

CHAPTER THIRTEEN - BRAKES

Brake fluid type / Brake service / Front brake pads / Front brake caliper / Front brake master cylinder / Rear brake pads / Rear brake caliper / Rear master cylinder / Brake hose and line replacement / Brake disc / Rear brake pedal / Brake bleeding / Brake fluid draining and flushing / Specifications

CHAPTER FOURTEEN - BODY

Seat / Front fender / Rear fender / Left side cover / Right side cover / Footrests / Footrest brackets / Sidestand / Fork lock / Specifications

SUPPLEMENT 2007-2013 SERVICE INFORMATION

Engine starting / Engine performance / Starting system / Charging system / Ignition system / Electronic diagnostic system / Fuel system / Brakes / Periodic maintenance / Cylinder head / Engine / Gearcase cover and timing gears / Shift lever assembly / Primary drive/clutch / Air filter backplate / Electronic fuel injection (EFI) / Depressurizing the fuel system / Induction module / Fuel injectors / Throttle position (TP) sensor / TMAP sensor / Idle air control (IAC) / Oxygen (O2) sensor / Throttle body / Intake manifold / Fuel tank / Fuel pump module / Throttle and idle cables / Fuel pressure test / Evaporative emission control system / (California models) / Exhaust system / Electrical Component Replacement / Battery / Charging system / Alternator / Ignition system / Electronic control module (ECM) / Engine temperature (ET) sensor / Lighting system / Security system / Hands-free security module (HFSM) / HFSM antenna / Fuel level sender resistor / Speedometer / Vehicle speed sensor (VSS) / Clutch switch / Side stand sensor / Wire harness caddy / Relays / Fuses / Electrical connector service / Front wheel / Rear wheel / Handlebar / Front forks / Brake fluid / Front brake master cylinder / Rear brake pedal / Rear fender / Specifications

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COLOR WIRING DIAGRAMS

Models covered

2004 2005 2006 2007 2008 2009 HARLEY-DAVIDSON XL833

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