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2007 Sportster

50th Anniversary of the Sportster

This is the first year of fuel injection on a Sportster. The new Electronic Sequential Port Fuel Injection (ESPFI) included front and rear O2 sensors, Throttle Position sensor, Head Temp sensors, and a fuel pump to allow for closed loop operation. This is the same ESPFI system that prior year model Dyna bikes, with minor tweaks to fit a Sportster.

There was also a special 50th Anniversary edition, limited to 2000 units¹⁾. The Nightster model was announced at the Harley-Davidson Winter Dealer Meeting, this new model marked the beginning of the blacked-out themed Sportsters²⁾.

Vehicle Identification Number (VIN)

Example: 1HD1CV3147K123456 appears as a decal on the right side of the steering head, on the right frame downtube and an abbreviated version is stamped in the engine left case below the 'V' in the cylinders.

Motorcycle Origin	Manufacturer/Make	Motorcycle Type	Model Designation	Engine Type	Introduction Date	VIN Check Digit	Model Year	Assembly Plant	Sequential Number
1=To be sold in US 5=To be sold outside US	HD=Harley Davidson	1 = 901 cc & up - (Heavyweight Motorcycle)	See Models below	2=883CC 3=1200CC	1=Regular 2=Mid Year 3=California 4=Cosmetic Changes 5=Cali\Cosmetic 6=Cali\Midyear	Can be 0 - 9 or X	7=2007	K = Kansas City, MO	
1	HD	1	CV	3	1	4	7	K	123456

VIN CODE ³⁾	MODEL Name
CN	XL 883 Sportster 883
CP	XL 883C Sportster 883 Custom
CR	XL 883L Sportster 883 Low
CS	XL 883R Sportster 883R
CT	XL 1200C Sportster 1200 Custom
CV	XL 1200R Sportster 1200 Roadster
CX	XL 1200L Sportster 1200 Low
CZ	XL 1200N Sportster 1200 Nightster
CY	XL 50 50th Anniversary Sportster

Engine, Drivetrain, Performance

Engine

⁴⁾	883 CC	1200 CC
Number of Cylinders	2	2
Type	4-cycle, 45° V	4-cycle, 45° V
Bore	3.0005 in. (76.20 mm)	3.498 in. (88.85 mm)
Stroke	3.812 in. (96.82 mm)	3.812 in. (96.82 mm)
Piston Displacement	53.86 cu. in. (883 cc)	73.2 cu. in. (1203 cc)
Compression Ratio	8.9:1	9.7:1

Drivetrain

⁵⁾	883 CC (Domestic)	1200 CC (Domestic)	883 CC (HDI/Japan)	1200 CC (HDI/Japan)
Primary Engine to Transmission				
Engine sprocket	34 teeth	38 teeth	34 teeth	38 teeth
Clutch sprocket	57 teeth	57 teeth	57 teeth	57 teeth
Ratio	1.676:1	1.500:1	1.676:1	1.500:1
Final Drive Transmission to Rear Wheel				
Transmission sprocket	28 teeth	29 teeth	28 teeth	30 teeth
Rear wheel sprocket	68 teeth	68 teeth	68 teeth	68 teeth
Secondary drive belt	136 teeth	137 teeth	136 teeth	137 teeth
Ratio	2.429:1	2.345:1	2.429:1	2.267:1

Performance

⁶⁾	883 CC	1200 CC
Torque	51.0 ft-lbs (69.2 Nm) @ 4300 RPM	79.0 ft-lbs (107.2 Nm) @ 3500 RPM

Models

2007 Models (VIN Model codes) ⁷⁾

XL 883 Sportster 883 (CN)



XL 883C Sportster 883 Custom (CP)

XL 883L Sportster (CR)

XL 883R Sportster (CS)

XL 1200C Sportster 1200 Custom (CT)

XL 1200R Sportster 1200 Roadster (CV)



XL 1200L Sportster 1200 Low (CX)

XL 50th Anniversary Sportster (CY)

The XLForum has a [registry](#) of these bikes.

50th Editions include:¹²⁾

- Serialized nameplate on handlebar clamp
- Gold “50th” fuel tank emblem
- New “H” silk-screening on side covers
- ☐Seat embroidered
- XL custom rear shocks

XL 1200N Sportster 1200 Nightster (CZ)

Features unique to a 1200N:¹³⁾

- Medium Gray powder-coated engine with polished and black treatments
- 25.3-inch solo seat height (Same as 883L)
- Black front forks with gaiters
- Bullet hole rear belt guard and front fender clamps
- Black, low rise handlebar with brake and clutch levers, turn signals and air cleaner insert
- Side-mounted license plate holder (dealer-installed rear mount option)
- Brake and tail lights integrated with rear turn signals
- Black-rimmed, Laced Steel wheels
- Chrome staggered shorty slash cut dual exhaust
- Silver Satin finish fuel cap, headlamp trim ring and oil dipstick cover

Model Year Changes

Summary of changes for MY 2007: ¹⁴⁾

- Electronic Sequential Port Fuel Injection with O2 sensors
- ALL 2007 models receive the “W” cams, reportedly giving the 883's 15% more torque
- New Speedometer with clock and dual trip meters (and UK dual faced)
- LED Indicators for high beam, oil light, turn signal indicators, and neutral light
- Reduced-effort clutch cable (8% reduction)
- Clutch interlock switch
- Eliminated catalysts in exhaust
- Many connectors are replaced with Molex connectors
- 1” drive belt with improved carbon fiber
- New Smart Security System (optional)
- 883L model lowered 25.25 in. seat height (new shocks and forks)
- Redesigned oil pump (entire pump retrofits to earlier years, but internal parts don't interchange)
- Intake flanges are redesigned (wider) for better access to fasteners
- Rocker box changed (supposedly to improve sealing)
- 32 Amp charging system (up from 22 amp)
- Reduced effort brake lever (single caliper 11%, dual caliper 14% reduction)
- DOT 4 brake fluid
- Handlebar wiring lengthened by 2” to make bar swaps easier

External Links

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HARLEY-DAVIDSON UNIVERSITY, TECHNICAL FORUM, 2007 MODEL YEAR

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<http://www.topspeed.com/motorcycles/motorcycle-reviews/harley-davidson/2007-harley-davidson-xl-1200n-nightster-ar26259.html>

[3\)](#)

Sportster Models Parts Catalog, PN 99451-07A, pg 2

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2007 Service Manual PN 99484-07A, Harley-Davidson, Sec 3.1

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2007 Service Manual PN 99484-07A, Harley-Davidson, Sec 6.1

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