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The opening pages of

1978 Harley-Davidson Shovelhead Buyer's Guide

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IRONHEAD

The 1978 Harley-Davidson Shovelhead Buyer & Restoration Guide

KEY FACTS AT A GLANCE

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Manufacturer History

The Shovelhead story starts in 1966. Harley-Davidson needed more power from its Big Twin to move the heavy Electra Glide dresser, and the answer was the Power Pac: new aluminum cylinder heads with larger valves and ports on the existing Panhead-style lower end, with the rocker boxes shaped like the business end of a coal shovel — the name every Harley fan knows today.

The first Shovelhead generation runs from 1966 through 1969: the generator (slabside) years. The generator hangs off the front of the engine cases, the ignition is breaker points, and ownership identification is the engine serial number. In 1970 the motor changed fundamentally — the alternator replaced the generator inside a redesigned cone-shaped timing case, the ignition points moved into the nose cone, and a nine-character VIN appeared. That cone motor is the second Shovelhead generation, and it runs all the way to 1984.

The model line grew with the motor. The 1971 FX Super Glide — Willie G. Davidson's factory custom combining the FL frame and 74-ci engine with a Sportster front end and the boat-tail rear — invented the cruiser category. The line expanded through the 1970s: electric-start FXE, the FXS Low Rider (mid-1977), the FXEF Fat Bob (1979), the belt-drive FXB Sturgis and FXWG Wide Glide and the all-new FLT Tour Glide (1980). Displacement grew from 74 cubic inches to an 80-ci option (mid-1978) and then the all-1340 line (1981). Carburetion moved from Linkert (1966) to Tillotson (1967–1970) to Bendix (1971–1975) to Keihin (1976 on). Breaker points gave way to Prestolite electronic ignition late in 1978. The 17-digit federal VIN arrived for 1981, and in June 1981 Harley's executives bought the company back from AMF. The FXR chassis (1982) brought rubber mounting and a 5-speed to the FX line, and in 1984 the Evolution engine arrived — ending the Shovelhead era that this guide covers.

Model History

This guide covers one model year only. The Shovelhead Big Twin line for the covered year is described in the key-facts section; model codes, carburetion, ignition, and chassis details are year-specific and must be verified against the year parts book. The through-line of the era is the cone motor introduced for 1970 (alternator, nose-cone points, nine-character VIN), refined year by year until the 1984 split between the final Shovelheads and the first Evolutions.

What Is Unique About 1978

80 CUBIC INCHES (mid-year) — the 1,340-cc option arrives on the FLH from mid-1978: 3.498 x 4.25 in (88.8 x 108 mm), 7.4:1 compression, about 65 bhp. Verify the 3G model code and build date — mid-year introduction bikes are distinct from full-1979 80-ci bikes.

ELECTRONIC IGNITION (late-year) — the Prestolite breakerless system is phased in late in 1978 with a solid-state regulator: the first electronic ignition on a Big Twin. Early-1978 bikes retain points — the ignition type must match the build date, not just the model year.

75th Anniversary editions — anniversary trim was offered for 1978; verify commemorative paint and badges against the parts book (anniversary fakes are common).

FXS: Harley’s best seller — the Low Rider’s first full year: nearly 20 percent of Harley’s sales; metallic gray with orange script at launch, black and white added late in the year. Last year of the 74-ci FXS (80 ci follows for 1979).

Alloy wheels / tubeless option — alloy wheels with tubeless tires offered; sprung buddy seat becomes an option with the hard-mounted double seat standard.

What 1978 Did Not Have

- No 80-ci FX models (1979); no standard electronic ignition across the line (1979 — 1978 is a phase-in year); no 75th Anniversary trim on 1979s.

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- No FL/FLH designation change — claims that "FL/FLH designations were dropped" for 1978 are a documented error (see the corrections companion).
- **Model year covered:** 1978 only (FL, FLH, FLH-80, FX, FXE, FXS). The 80-ci and electronic-ignition year; the 75th Anniversary year.
- **Engine:** 74 cu in (1,207 cc) standard; 80 cu in (1,340 cc) optional on the FLH from mid-year — 3.498 x 4.25 in (88.8 x 108 mm), 7.4:1, about 65 bhp.
- **Ignition:** Prestolite breakerless electronic ignition phased in late in the year (early-1978 bikes retain points); solid-state regulator.
- **Fuel system:** Keihin carburetor.
- **The FXS:** First full production year — outsold every other Harley, accounting for nearly 20 percent of total sales; initially metallic gray with orange script, black and white offered late in the year.
- **75th Anniversary editions** were offered for 1978.
- **Wheels:** Alloy wheels with tubeless tires offered as an option.
- **Seats:** Large sprung buddy seat becomes an option; hard-mounted double seat standard.
- **Starting:** Electric (FL/FLH/FXE/FXS); kick only (FX).
- **Transmission:** 4-speed constant-mesh; left-foot shift; chain final drive; dry multi-plate clutch.
- **Identification:** 9-character VIN (3G = FLH-80); year code H8.
- **Key 1978-only features:** Mid-year 80-ci introduction; late-year electronic ignition; 75th Anniversary editions; last 74-ci year on the FXS.

1978 Technical Specification

- **Models covered:** the FL, FLH, FLH-80, FX, FXE, and FXS Low Rider
- **Engine:** 1,207 cc (74 cu in), or 1,340 cc (80 cu in, FLH option from mid-year) air-cooled 45-degree OHV V-twin (Shovelhead)
- **Bore x stroke:** 74: 3.4375 x 4.00 in (87.3 x 100.8 mm); 80: 3.498 x 4.25 in (88.8 x 108 mm)
- **Compression ratio:** 74: 8.0:1; 80: 7.4:1
- **Power:** 74: 58 bhp @ 5,150 rpm; 80: 65 bhp (valuation-marque data)
- **Carburetion:** Keihin
- **Ignition:** Prestolite breakerless electronic ignition phased in late in the year (points early-year); solid-state regulator
- **Starting:** Electric starter (FL/FLH/FXE/FXS); kick starter (FX)
- **Transmission:** 4-speed constant-mesh; left-foot shift; chain final drive; dry multi-plate clutch
- **Brakes:** Disc brakes at each wheel (all models); FXS: dual front discs (period spec-sheet data)
- **Wheels:** Wire-spoked standard; alloy wheels with tubeless tires optional (new)

Identification: Engine Serial and VIN

For 1966 through 1969, ownership identification is the engine serial number stamped on the left engine case. From 1970, Harley-Davidson used a nine-character VIN: the first two characters identify the model, the next five are the production sequence, and the last two are the model year (H0–H9 = 1970–1979, J0 = 1980). From 1981, the federal 17-digit VIN applies (10th character = model year).

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Nine-character VIN model codes (1970-1980 era)

Code	Model	Years
1A	FL-1200	1966–1973 (74 ci dresser)
2A	FLH-1200	1966–1980 (74 ci Electra Glide)
2C	FX-1200	1971–1974 (74 ci Super Glide)
2D	FX-1200	1975–1976 (74 ci Super Glide)
2E	FX-1200	1977 (74 ci Super Glide)
9D	FXE-1200	1974–1977 (74 ci Super Glide, electric start)
2F	FXS-1200	1977–1978 (74 ci Low Rider)
4F	FXS-80	1979–1980 (80 ci Low Rider)
6F	FXEF	1979 (Fat Bob)
7F	FXEF-80	1979–1980 (80 ci Fat Bob)
5F	FXE-80	1979–1980 (80 ci Super Glide)
3G	FLH-80	1978–1984 (80 ci Electra Glide)
5G	FLT-80	1980–1983 (80 ci Tour Glide)
6G	FXE-80	1981 (80 ci Super Glide)
7G	FXWG-80	1980–1984 (80 ci Wide Glide)
8G	FXB-80	1980–1982 (80 ci Sturgis)

Nine-character year codes: 1970 = H0, 1971 = H1, 1972 = H2, 1973 = H3, 1974 = H4, 1975 = H5, 1976 = H6, 1977 = H7, 1978 = H8, 1979 = H9, 1980 = J0.

Federal 17-digit years: The 10th character of the 17-digit federal VIN is the model-year code: 1981 = B, 1982 = C, 1983 = D, 1984 = E.

What to Check Before You Buy

Build-date matching. 1978 packs two running changes (80-ci mid-year, electronic ignition late-year) — the engine, ignition, and VIN build date must all agree; mismatches are the norm on “1978” bikes, not the exception.

Early 80-ci engines. Watch top-end oiling, piston clearances, and lean Keihin jetting on the first 80-ci bikes — reliability complaints run through 1979–1980.

Electronic-ignition parts. Late-1978 Prestolite modules and pickups are increasingly hard to find — test the module before committing to paint.

Anniversary fakes. Verify 75th Anniversary paint and badges against the parts book; tribute bikes abound.

Paint and Finishes

- **75th Anniversary editions:** anniversary trim offered for 1978 — verify commemorative paint and badges against the year parts book.
- **FXS:** metallic gray with orange script at launch; black and white offered late in the model year.

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- Standard colors: verify against the year parts book (Painted Parts section); repaint in a non-factory color is the single biggest value deduction on a restored bike.
- **Hidden original paint:** check under the seat, inside the side covers, and behind badges for the original finish before trusting any color claim.

Production

The FXS accounted for nearly 20 percent of Harley-Davidson's total sales in its first full year (1978). No reliable model-by-model production total was found in the sources consulted.

The Technical Restoration Content

Casting and date codes

Engine cases, cylinders, and heads carry casting numbers and date codes. A factory-correct restoration matches casting numbers to the model year and checks date codes against the build date — parts cast months after the bike's assembly date are replacements. Photograph every casting number before disassembly; the year parts book lists the correct numbers.

Torque specs

Do not use torque values from memory or from generic charts. Head bolts, case bolts, and critical fasteners are torque-to-yield or angle-sensitive on these engines, and published values vary between sources. Use the year-correct Harley-Davidson factory service manual for every torque value, and follow its sequence. If you cannot verify a number, follow the factory manual procedure — a wrong torque value breaks cases.

Gaskets and seals

Shovelheads mark their territory. A restoration that aims at correctness uses the right gasket materials for the year (cork, paper, or composition as the parts book specifies), and a restoration that aims at riding replaces every seal in the primary, the rocker boxes, and the pushrod tubes as a matter of course. Budget for it; there is no cheap way around it.

The top end

The Shovelhead's aluminum heads are its glory and its weakness. Check valve guides, seats, and the head gasket surface before committing to machine work. Overheating history shows in discolored fins and pulled head-bolt inserts — both are repairable, both cost money, and both should be found before paint.

The bottom end

The 1966–1969 generator lower end and the 1970-on cone lower end share the Shovelhead top end but differ in the timing chest, oiling, and charging system — parts do not freely interchange between the generations. Verify the case casting against the model year before buying a "rebuilt" engine.

Rust-prone areas

Check the frame at the steering head and swingarm pivot, the inside of the gas tanks, the fender mounting points, and the floorboard/forward-control brackets. Chrome that looks tired is usually telling the truth about the metal underneath — budget for re-chroming, not polishing.

Restoration sequence

1. Verify numbers (engine serial / VIN, title, model codes) before spending anything.

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2. Assess the engine: compression, leak-down, oil pressure history.
3. Frame and sheet metal: straighten, repair, then paint — never paint before the mechanical assessment.
4. Rebuild the engine and transmission to the year-correct specification.
5. Re-chrome and re-plate to the year-correct finish.
6. Reassemble with the year parts book open — fasteners, clamps, and finishes are year-specific.
7. Final verification: every number, every code, every finish against the book.

Shop the Supplies

The parts and tools for this restoration are covered in the IronHead parts-and-tools box at ironheadguides.com. Buy the year-correct factory service manual first — it is the single most valuable tool in a Shovelhead restoration.

Sources

- Rider Magazine — Retrospective: Harley-Davidson Shovelhead 1966–1984 (Power Pac heads; 1966 FLH 60 hp @ 5,500; generator 1966–1969; alternator/points-in-timing-case from 1970) —
  `http://ridermagazine.com/retrospective-harley-davidson-shovelhead-1966-1984`
- Bonhams — documented 1966 FLH, first Shovelhead year (engine no. 66FLH2575; second-year electric start; fiberglass saddlebags) —
  `https://cars.bonhams.com/auction/24509/lot/156/1966-harley-davidson-1200cc-flh-electra-glide-engine-no-66flh2575/`
- Linkert reference — DC-7 for 1966 FL/FLH —
  `http://www.linkertcarbs.com/linkert.html`
- Lowbrow Customs — Harley-Davidson motorcycle VIN lookup/decoder chart (1970–1980 nine-character VIN; model codes; H0–H9/J0 year codes) —
  `https://www.lowbrowcustoms.com/blogs/motorcycle-how-to-guides/harley-davidson-motorcycle-vin-lookup-decoder-chart`
- Zodiac/INOA — Harley model years explained (17-digit federal VIN from 1981; 10th character = model year: B = 1981, C = 1982, D = 1983, E = 1984) —
  `https://zodiac.nl/docs/instructions/Harley`
- Hagerty valuation — 1978: 75th Anniversary Edition, electronic ignition, 74→80 ci, 65 bhp, alloy wheels/tubeless option, buddy-seat change —
  `https://www.hagerty.com/valuation-tools/harley~davidson/flh/1977/1977-harley~davidson-flh`
- Sportsterpedia — Prestolite electronic ignition phased in late 1978 (module 32598-78; mechanical advance retained) —
  `https://sportsterpedia.net/techtalk:ih:engctl01c?do=export_pdf`
- HowStuffWorks — 1978 FXS (best seller, ~20% of sales; colors; last 74-ci year) —
  `https://auto.howstuffworks.com/1978-harley-davidson-fxs.htm`
- Lowbrow Customs VIN guide — 3G = FLH-80 model code —
  `https://www.lowbrowcustoms.com/blogs/motorcycle-how-to-guides/harley-davidson-motorcycle-vin-lookup-decoder-chart`

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