FREE SAMPLE

The opening pages of

1949 Harley-Davidson Panhead Buyer's Guide

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IRONHEAD

1949 Harley-Davidson Panhead — Factory-Correct Restoration Guide

IronHead single-year guide · Model year 1949 only · Covers all 1949 Panhead Big Twins — the 61ci E/EL and the 74ci F/FL, including sidecar and spring-fork variants · The 1948 Panhead and all later years are out of scope except where differences are noted

Factory-correct restoration guides for classic motorcycles

KEY FACTS AT A GLANCE

- **Model year covered:** 1949 only — the first year of the Hydra-Glide. EL (61ci high-compression), E (61ci medium-compression), FL (74ci high-compression), and F (74ci medium-compression) Big Twins, plus ES/FS sidecar-geared and ELP/FLP spring-fork variants.
- **Engine:** 74ci (73.66 cu in) 45-degree air-cooled OHV V-twin; 3-7/16 x 3-31/32 in bore x stroke; 7.0:1 compression (FL). 61ci EL: 3-5/16 x 3-1/2 in, 60.32 cu in, 7.0:1. Aluminum heads, hydraulic lifters, internal oil lines.
- **Fuel system:** Updated carburetor over 1948.
- **Ignition:** 6-volt battery, Harley-Davidson-made breaker points (first year of H-D's own points); kick start only.
- **Transmission:** 4-speed constant-mesh; hand shift, foot clutch. No foot-shift option in 1949.
- **Chassis:** Wishbone rigid frame; all-new telescopic Hydra-Glide fork (first year); larger 8-inch front drum brake, up from 1948's 7.25 inches.
- **Wheels/tires:** Wire-spoked wheels; factory tire data lists 4.00 x 18, 4.50 x 18, and 5.00 x 16 fitments.
- **Dimensions:** 59.5-inch wheelbase.
- **1949 colors:** Brilliant Black, Burgundy, Peacock Blue, Police Silver; extra-cost Metallic Congo Green.

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- **Identification:** No frame VIN — the engine serial (left case, between the cylinders, e.g. 49FL1234) is the ownership number. Springer variants (ELP/FLP) had the P stamped at the end. Belly numbers on both crankcase halves must match each other.
- **Production:** EL 3,419; FL 8,014; ES 177; FS 490; ELP 99; FLP 486 — 12,685 across the listed models (compiled figures; Harley-Davidson published no official year totals; E, EP, F, and FP figures are not reported).
- **1949 price new:** $750 (FL), $735 (EL).
- **Key 1949-only features:** first year of the Hydra-Glide fork and the Brooks Stevens teardrop-tank restyle; first year of stainless-steel pan covers (1948's were chromed); stainless-steel timer and generator covers and chrome relay cover for one year only; new fenders, headlamp, steering damper, and handlebar controls.

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1. Manufacturer history: Harley-Davidson

Harley-Davidson was founded in Milwaukee, Wisconsin, in 1903 by William S. Harley and Arthur Davidson, with Walter and William A. Davidson joining the effort. The first factory went up in 1906; the first V-twin appeared in 1909. Through the 1910s and 1920s Harley built its name on V-twins and racing success; the 45-cubic-inch flathead models of the 1930s kept the company alive through the Depression, and the 1936 EL Knucklehead brought overhead valves to the Big Twin line.

The 1948 Panhead — aluminum heads, hydraulic lifters, internal oiling on the Knucklehead bottom end — was Harley's answer to the Knucklehead's heat and oil troubles, and the company's 1948 sales record (31,163 motorcycles of all types) proved the market was ready. For 1949 Harley gave the new engine the chassis it deserved.

The Panhead era that followed is the backbone of this brand: the 1949 Hydra-Glide added telescopic front forks, the 1958 Duo-Glide added rear suspension, and the 1965 Electra Glide added electric start and 12-volt electrics. The Panhead ran from 1948 through the 1965 model year, when the Shovelhead took over for 1966.

For the restorer, the authority is the factory literature: the Harley-Davidson Panhead service manual (1948–1957) and the year parts catalogs, backed by Bruce Palmer's *How to Restore Your Harley-Davidson*, Greg Field's *Original Harley-Davidson Panhead*, and the production research compiled by the Panhead & Flathead Site. This guide cites those sources throughout.

2. Model history: the Panhead Big Twin, 1948–1965

The 1948 Panhead kept the Knucklehead's proven crankcases, flywheels, and gear train and changed everything above the cylinders: finned aluminum heads with bronze valve seats and steel inserts, pushrod-operated hydraulic lifters, and redesigned rocker arms under pan-shaped covers. A larger oil pump and revised camshaft, ports, and intake added roughly 5 hp.

1949 was the year the look changed. Industrial designer Brooks Stevens — already known for the new look of Harley's line — gave the Big Twin teardrop fuel tanks with a painted-and-chromed split panel, a new headlamp with chrome rim, new handlebar controls, new fenders front and rear, and a steering damper. Underneath, the big news was the Hydra-Glide: hydraulically damped telescopic front forks replacing the springer, paired with a larger 8-inch front drum brake (up from the 1948 7.25-inch unit). The springer survived only on special-order variants for sidecar and package-truck use — Harley still recommended it for outfits.

The model letters work like this. **E** = 61ci medium-compression (6.5:1); **EL** = 61ci high-compression (7.0:1); **F** = 74ci medium-compression (6.6:1); **FL** = 74ci high-compression (7.0:1). **S** = sidecar gearing; **P** = springer fork (stamped at the end of the serial in 1948–1949). **H** (1955 on) = Super Sport; **B** (1965) = electric start; **F** (not first letter, 1952 on) = foot shift; **E** as third letter = Traffic Combination motor with 61ci cam and M61 carburetor.

Year	What changed
1948	First Panhead: aluminum heads, hydraulic lifters, internal oiling; wishbone frame; springer fork (one year only); chromed pan covers (one year only); E/EL and F/FL.
1949	**Hydra-Glide telescopic fork replaces the springer; Brooks Stevens restyle — teardrop tanks with painted-and-chromed split panel, new headlamp, fenders, steering damper, controls; front brake grows 7.25 to 8 inches; Harley-Davidson makes its own breaker points.**

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Year	What changed
1950	Redesigned heads with enlarged inlet ports (about 10 percent more power); fixed-jet recalibrated carburetor; die-cast fork sliders; Mellow-Tone mufflers; primary-cover screw pattern changes to 6 and 12 o'clock.
1951	Two-piece cam with ramps both sides; rocker arms machined with pushrod sockets; mid-year Linkert M-74B carburetor (stays through 1965); larger pinion shaft; new script tank emblem.
1952	Foot-shift option; all Panheads high-compression only; last year for the 61ci EL; rotating exhaust valves late in the year; generator model 52.
1953	Lifters relocated from top of pushrods to below them; FLE Traffic Combination introduced; 4-rib gearcase cover; 24-roller pinion shaft.
1954	Golden Anniversary brass medallion on front fenders; tapered pinion shaft; Jubilee trumpet horn; first optional dual exhaust; winged fireball emblems.
1955	FLH Super Sport introduced — 8:1 compression, 60 hp @ 5,500 rpm; stronger bottom end with Timken mains; oval taillight; "V" tank emblem.
1956	"Victory" high-lift cam for the FLH and a flow-through air cleaner — about 12 percent more power; redesigned right crankcase oiling.
1957	Round Lucite tank emblem (first plastic emblem); polished aluminum rocker covers; steel-alloy valve guides from February 1; stronger valve springs from 57FLH4444.
1958	Duo-Glide: swingarm rear suspension and hydraulic rear drum brake; thicker cylinder-head fins; brush generator; step-down straight-leg frame.
1959	Arrow-Flite tank emblem; green neutral indicator on the foot-shift dash; chrome front fender tip; black footboards.
1960	Two-piece aluminum fork nacelle; Stellite-faced exhaust valves; rail-type oil-control rings; extra-heavy valve springs.
1961	Dual-point single-fire ignition with individual condensers; rear-cylinder timing mark added mid-year; four-point-star tank emblem.
1962	"Tombstone" speedometer; three round indicator lights; brushed-aluminum trim pieces.
1963	External oil lines to the cylinder heads; wider rear brake hub and shoes; round turn-signal housings; fiberglass saddlebags; new bar-and-shield tank emblem.
1964	Breather hole in the primary housing; oil-pressure switch; hollow hex timer adjuster; last year of the Duo-Glide.

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Year	What changed
1965	Electra Glide: electric start, 12-volt electrics, new frame, aluminum primary cover, automatic spark advance; last year of the Panhead.

The company context matters when judging a bike. The postwar boom made the late 1940s Harley's biggest years yet; by the mid-1950s British imports were pressuring the sporting end of the market (answered by the 1952 K-model and the 1957 Sportster), while the Big Twin settled into its long career as America's touring motorcycle. The 1969 AMF takeover came after the Panhead era; no Panhead left Milwaukee under AMF ownership.

3. What is unique about the 1949 Panhead

The 1949 is the first Hydra-Glide — the year the Panhead got modern forks, modern brakes, and the Brooks Stevens look that defined the Big Twin through the early 1950s. Factory-correct 1949 details are overwhelmingly about the chassis and trim, because the engine carried over almost unchanged from 1948.

1949-only/first-year details:

- **Hydra-Glide telescopic fork — first year.** Hydraulically damped; rigid

fork covers on all models except the ELP/FLP spring-fork variants. A 1949 with a springer is a special-order ELP/FLP (P stamped at the end of the serial), not a standard bike.

- **Larger front brake: 8 inches**, up from 1948's 7.25 inches — paired with

the new fork.

- **Brooks Stevens restyle:** teardrop fuel tanks with painted-and-chromed

split panel; new headlamp with chrome rim; new handlebar controls; new fenders front and rear; new steering damper.

- **Air-Flow fenders** — new fender line front and rear for 1949; the

two-piece hinged rear fender wears three "Sergeant stripes."

- **Harley-Davidson-made breaker points** — first year of H-D's own

manufacture (a supplier part in 1948).

- **Stainless-steel pan covers** replace 1948's one-year-only chromed covers.
- **Optional whitewall tires** — first year offered.

What did NOT exist in 1949 (common mix-ups):

- No foot shift (1952), no FLH (1955), no rear suspension (1958), no

12-volt system or electric start (1965).

- No "1949 Springer FL" as a standard model — the springer survived only on

the ELP/FLP outfit variants, which Harley recommended for sidecar use.

1949 buyer cautions:

- **Hydra-Glide conversions.** Many 1948 springers were retrofitted with the

new fork by dealers and owners. A claimed-1949 with a springer needs ELP/FLP documentation (P suffix in the serial); a claimed-1948 with a Hydra-Glide fork needs 1948 documentation. Check the serial against the title before paying a premium for either.

- **Teardrop tank panels.** Reproduction split panels are common; original

1949 panels carry the correct Brooks Stevens graphics — compare against the factory parts catalog, not against later-year panels.

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- **Same first-generation engine as 1948:** the 1949 lifters still sit atop

the pushrods (relocated in 1953), with the same oil-supply caveats as the 1948 guide's section 4.10.

4. Technical restoration data — 1949 Harley-Davidson Panhead

4.1 Frame and engine numbers (1949)

Pre-1970 Harleys carry no frame VIN — the engine number is the ownership number. It is stamped on the left crankcase between the cylinders, in the form year-digits + model letters + sequential number, for example:

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49FL1234
49 = model year | FL = model | 1234 = sequential number
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Springer-fork variants (ELP, FLP) had the **P stamped at the end** of the serial. The frame carries only manufacturing stampings and casting numbers.

Belly numbers are stamped on the bottom of each crankcase half. They were stamped by the machinist to identify a matched pair of cases through line boring and final machining — the two halves must carry the SAME belly number, and the belly number has no direct relationship to the engine serial.

4.2 Engine specifications (1949)

Item	Specification
Configuration	45-degree air-cooled OHV V-twin; pushrod hydraulic lifters; aluminum heads
Displacement	73.66 cu in (74ci class) / 60.32 cu in (61ci class)
Bore x stroke	3-7/16 x 3-31/32 in (87.3 x 100.8 mm) — 74 / 3-5/16 x 3-1/2 in — 61
Compression ratio	FL/EL: 7.0:1; F: 6.6:1; E: 6.5:1
Claimed output	FL: 50 hp @ 4,800 rpm (reported for the 1948 FL; the 7.0:1 FL engine carried through 1954 — confirm against the factory service manual for the exact year). No published figure survives for the 61 — do not quote internet estimates.
Carburetor	Revised specification for 1949 — rebuild to the factory service manual settings for the exact year
Ignition	6-volt battery, Harley-Davidson-made breaker points
Starting	Kick starter only
Clutch	Dry multi-plate
Lubrication	Dry sump; gear-driven oil pump

4.3 Carburetion and electrical

- Revised carburetor specification for 1949 over the 1948 Schebler — rebuild

with the factory service manual settings for the exact year

- 6-volt battery ignition with Harley-Davidson-made breaker points; verify

charging under load

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