FREE SAMPLE

The opening pages of

1948 Harley-Davidson Panhead Buyer's Guide

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IRONHEAD

1948 Harley-Davidson Panhead — Factory-Correct Restoration Guide

IronHead single-year guide · Model year 1948 only · Covers all 1948 Panhead Big Twins — the 61ci E/EL and the 74ci F/FL, including sidecar-geared variants · The 1949 Hydra-Glide 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:** 1948 only — the first year of the Panhead. EL (61ci high-compression), E (61ci medium-compression), FL (74ci high-compression), and F (74ci medium-compression) Big Twins, plus ES/FS sidecar-geared 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); 50 hp @ 4,800 rpm (FL, factory figure). 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:** Schebler carburetor (33.3 mm on the FL).
- **Ignition:** 6-volt battery, breaker points; kick start only.
- **Transmission:** 4-speed constant-mesh; hand shift, foot clutch. No foot-shift option in 1948.
- **Chassis:** New wishbone rigid frame (bowed down tubes to clear the taller engine); springer front fork — the only Panhead year with a springer; 7.25-inch front drum brake.
- **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; 565 lbs (FL).
- **1948 colors:** Brilliant Black, Flight Red, Azure Blue, Police Silver.
- **Identification:** No frame VIN — the engine serial (left case, between the cylinders, e.g. 48FL1234) is the ownership number. Belly numbers on both crankcase halves must match each other.

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- **Production:** EL 4,321; FL 8,071; ES 198; FS 334 — 12,924 across the listed models (compiled figures; Harley-Davidson published no official year totals; the medium-compression E and F figures are not reported).
- **1948 price new:** $650 (FL), $635 (EL).
- **Key 1948-only features:** the only Panhead year with a springer fork; the first and last year of chromed rocker ("pan") covers — stainless steel from 1949; edge-lighted Stewart-Warner speedometer; steering-head lock; Bonderized enamel paint process.

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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 Knucklehead's cast-iron heads ran hot and wept oil — shortcomings Harley's engineers worked on through the war years, when military WLA production kept the factory at full stretch. The answer arrived for 1948: the Panhead, which kept the Knucklehead's proven bottom end and fitted an entirely new top end — aluminum heads that shed heat, hydraulic valve lifters that ended constant valve adjustment, and oil lines routed inside the engine instead of outside it. Harley sold a record 31,163 motorcycles of all types in 1948.

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 was a top-end revolution on a proven bottom end. Milwaukee kept the Knucklehead crankcases, flywheels, and gear train, and changed almost everything above the cylinders: finned aluminum heads with bronze valve seats and steel inserts for the head bolts and plugs, pushrod-operated hydraulic lifters, and redesigned rocker arms under covers shaped like upside-down roasting pans — the "pan" that named the engine. A larger oil pump boosted flow about 25 percent, and a new camshaft, exhaust ports, and intake manifold added roughly 5 hp over the Knucklehead.

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, higher compression still; **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 on the Knucklehead bottom end; new wishbone frame; springer fork — the only Panhead year with one; chromed pan covers (one year only); E/EL 61ci and F/FL 74ci.**
1949	Hydra-Glide telescopic fork replaces the springer; Brooks Stevens restyle with teardrop tanks; front brake grows from 7.25 to 8 inches; Harley-Davidson makes its own breaker points.
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.

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

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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 1948 Panhead

The 1948 is the genesis Panhead and a one-year transitional motorcycle: the new engine in the old chassis. It is the only Panhead ever fitted with a springer fork, the only year with chromed rocker covers, and the only year of several small details that changed for 1949's Hydra-Glide restyle. A factory-correct 1948 restoration is a first-year restoration — nearly every trim specification on the bike changed within a year.

1948-only details:

- **The only Panhead with a springer fork.** The 1949 Hydra-Glide replaced it

with telescopic forks; a 1948 with a Hydra-Glide front end is modified, not original. (Harley did continue to recommend the springer for sidecar and package-truck outfits even after 1949 — see the 1949 guide.)

- **Chromed pan covers — one year only.** 1948 is the first and last year for

chromed rocker covers; from 1949 they are stainless steel. This is one of the fastest visual tells on a claimed-1948 bike.

- **Edge-lighted Stewart-Warner speedometer** with odometer, tripmeter,

bluish-gray center panel, cream-white mph numerals, and red needle in a chromed case.

- **Bonderized enamel** paint process — new for 1948.
- **Steering-head lock** — new across the Big Twin line for 1948.
- **High-temperature black-painted mufflers and exhaust pipes** (late-year

bikes got silver-painted pipes); optional tank-mounted oil filter.

- **Wiring terminal box under the seat** and the optional Deluxe Solo Saddle

returning after the war.

What did NOT exist in 1948 (common mix-ups):

- No telescopic fork (1949), no foot shift (1952), no FLH (1955), no rear

suspension (1958), no 12-volt system or electric start (1965).

- No "Hydra-Glide" anywhere — the name was coined for the 1949 fork. A

"1948 Hydra-Glide" is always mis-titled.

- The 74ci medium-compression **F** and 61ci **E** existed alongside the FL

and EL — a low-compression 1948 is not automatically wrong.

1948 buyer cautions:

- **First-year teething.** The aluminum heads expanded more than the iron

Knucklehead heads they replaced, which is exactly why Harley fitted hydraulic lifters — but the 1948 lifters sat atop the pushrods where oil supply was marginal. Lifters were relocated in 1953. Check any 1948 top end for the 1953-and-up lifter-block update; it is a legitimate period service improvement, but a concours restoration wants the 1948 arrangement.

- **Oil lines.** The internalized oil lines were new in 1948 — verify routing

against the factory manual, not against later years.

- **Springer originality.** Reproduction springers are common; date codes and

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casting details separate a real 1948 fork from a later replacement.

4. Technical restoration data — 1948 Harley-Davidson Panhead

4.1 Frame and engine numbers (1948)

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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48FL1234
48 = model year | FL = model | 1234 = sequential number
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The **P** suffix denotes spring-fork models and is stamped at the end of the serial when present. 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. The number before the dash encodes the year machined and the engine family; the number after is an arbitrary shop sequence.

4.2 Engine specifications (1948)

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 (factory figure). No published factory figure survives for the 61 — do not quote internet estimates.
Carburetor	Schebler (33.3 mm on the FL)
Ignition	6-volt battery, breaker points
Starting	Kick starter only
Clutch	Dry multi-plate
Lubrication	Dry sump; enlarged gear-driven oil pump (about 25 percent more flow than the Knucklehead pump)

4.3 Carburetion and electrical

- Schebler carburetor on the FL for 1948; recalibration came in 1950
- 6-volt battery ignition with breaker points; verify charging under load
- Kick starter only; no electric-start provision of any kind

4.4 Transmission and final drive

- Four-speed constant-mesh gearbox, separate from the engine

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