MOTO PORCH

Harley-Davidson Road King Buyer's Kit

Years covered: 1994 to present

The classic windshield-and-hard-bags touring Harley. Used ones span three engine families, and the most important question changes depending on which one you are looking at.

First bike? Heavy (over 800 lb wet) and hard to manage at walking speed. Better as a second bike after a season on something lighter.

Generations

Evolution (1994 to 1998)
Evo engine. Simple and well understood, but now old.

Twin Cam 88 (1999 to 2006)
Spring-loaded cam chain tensioners.

Twin Cam 96 / 103 (2007 to 2016)
Hydraulic cam chain tensioners and a 6-speed transmission. 2009 brought a new frame and swingarm.

Milwaukee-Eight (2017 to present)
Four-valve heads, smoother and more powerful. Different set of questions.

Known problems by year

Cam chain tensioner shoe wear

Years: 1999 to 2006 | Concern: high

The spring-loaded cam chain tensioner shoes on Twin Cam 88 engines are widely reported to wear, and broken shoe material can damage the oil pump and engine. Many owners have upgraded to gear-drive cams or hydraulic tensioners.

- [ ] Check: Ask if the cam tensioners have been inspected or upgraded, and ask for the receipt and what was installed. If not done, factor the cost into your offer.

Hydraulic tensioner shoes still need inspection

Years: 2007 to 2016 | Concern: low

The hydraulic tensioners reduced the problem but did not eliminate shoe wear. The evidence is mostly owner reports, and many engines show little wear at 50,000 to 70,000 miles. An inspection is a sensible precaution on a high-mileage engine, though we did not find a factory interval for it.

- [ ] Check: On high-mileage bikes, ask when the cam chest was last opened and inspected.

Safety recalls on record

Recalls are repaired free by a dealer. Ask the seller for proof the work was done, or have a dealer check the VIN.

- [ ] 2020 to 2022: exterior lighting:brake lights (NHTSA #22V781000, listed for FLHR, FLHRXS) - confirm by VIN
- [ ] 2017 to 2018: power train:clutch assembly (NHTSA #18V734000, listed for FLHR, FLHRXS) - confirm by VIN
- [ ] 2017: engine and engine cooling (NHTSA #17V333000, listed for FLHR, FLHRXS) - confirm by VIN
- [ ] 2014 to 2015: equipment (NHTSA #15V427000, listed for FLHR) - confirm by VIN
- [ ] 2014: service brakes, hydraulic (NHTSA #14V319000, listed for FLHR, FLHRC) - confirm by VIN
- [ ] 2009 to 2012: exterior lighting:brake lights:switch (NHTSA #11V506000, listed for FLHR, FLHRC) - confirm by VIN
- [ ] 2009 to 2010: fuel system, gasoline:storage:tank assembly:mounting (NHTSA #09V457000, listed for FLHR, FLHRC) - confirm by VIN
- [ ] 2008 to 2011: service brakes, hydraulic:fluid (NHTSA #18V076000, listed for FLHR, FLHRC, FLHRC103) - confirm by VIN
- [ ] 2008: fuel system, gasoline:storage:tank assembly:filler pipe and cap (NHTSA #08V357000, listed for FLHR, FLHRC) - confirm by VIN
- [ ] 2004: fuel system, gasoline:storage:tank assembly (NHTSA #04V465000, listed for ROAD KING) - confirm by VIN
- [ ] 2003: exterior lighting:tail lights (NHTSA #04V218000, listed for FLHR, FLHRCI) - confirm by VIN
- [ ] 2001 to 2002: exterior lighting (NHTSA #02V002000, listed for FLHR, FLHRI) - confirm by VIN
- [ ] 1999: engine and engine cooling:engine:gasoline (NHTSA #99V003000, listed for FLHR, FLHRCI) - confirm by VIN

Road King-specific checks

- [ ] Identify the engine family from the year and confirm it on the engine case.
- [ ] 1999 to 2006: ask about cam chain tensioners and ask for proof of upgrade.
- [ ] Ask for a list of all engine work, who did it, and which tuner and map are in use.
- [ ] Check the primary and transmission for leaks along the cases.
- [ ] Check the belt for cracks, missing teeth and rock damage. Belt replacement is expensive.
- [ ] Check that the bag latches, lids and mounts work and are not cracked.
- [ ] Test the cruise control (where fitted) and all lights, including aux lights.

Before you go

- [ ] Ask the seller not to start or warm up the bike before you arrive. A cold start shows problems a warm engine hides.
- [ ] Ask for the VIN by text and run a recall check at nhtsa.gov/recalls before you drive over.
- [ ] Ask for a photo of the title. Confirm it is in the seller's name and is not marked salvage, rebuilt or flood.
- [ ] Bring a flashlight, a rag, a tire pressure gauge, and cash or a payment plan you have already agreed on.
- [ ] If you are a new rider, bring someone who can ride the bike for you on the test ride.

Paperwork

- [ ] VIN on the frame (steering head) matches the VIN on the title.
- [ ] Title is in the seller's name, with no lien listed (or a lien release in hand).
- [ ] Title is not branded salvage, rebuilt, flood or junk.
- [ ] Seller's ID matches the name on the title.
- [ ] Service records, receipts or a logbook, if any.
- [ ] Both keys are present.

Walkaround

- [ ] Tires: check tread depth and the 4-digit DOT date code (week and year). Tires older than about 5 to 6 years should be replaced regardless of tread.
- [ ] Chain and sprockets (if chain drive): hooked or pointed sprocket teeth, kinked or rusty links, or a chain that pulls far off the rear sprocket mean replacement soon.
- [ ] Brakes: pad thickness, rotor grooves or lip, and brake fluid color (clear to light amber is good, dark brown is overdue).
- [ ] Fork tubes: look for oil on the tubes or below the seals, and pitting on the chrome.
- [ ] Drop damage: scuffed bar ends, levers, footpegs, mirrors, engine covers, frame sliders and the tank. Bent levers or a crooked handlebar mean it went down.
- [ ] Frame and subframe: cracks, kinks, fresh paint or welds near the steering head, footpeg mounts and swingarm pivot.
- [ ] Leaks: oil or coolant under the engine, around the cylinder head, the water pump and the drain plug.
- [ ] Fluids: oil level and color in the sight glass or dipstick. Milky oil can mean coolant mixing in.
- [ ] Steering head bearings: with the front wheel off the ground (or a friend leaning the bike back), turn the bars slowly. Notchy or a center detent means worn bearings.
- [ ] Wheel bearings: grab each wheel top and bottom and try to rock it. Any clunk means worn bearings.
- [ ] Electrics: headlight high and low, brake light from both the lever and pedal, turn signals, horn, neutral light, kill switch and side stand switch.
- [ ] Modifications: aftermarket exhaust, intake or wiring. Ask what was changed and whether the fuel system was tuned to match.

Cold start

- [ ] Feel the engine before starting. If it is already warm, ask why.
- [ ] Starter should spin the engine briskly. A slow crank points to a weak battery or charging problem.
- [ ] Watch the exhaust on startup. Blue smoke means burning oil. White smoke that does not clear after warm-up can mean coolant.
- [ ] Listen for knocking, loud ticking or rattles that do not settle as it warms up.
- [ ] With a multimeter: about 12.6V at the battery engine off, and roughly 13.5V to 14.5V with the engine at a fast idle. Outside that range, suspect the charging system.

Test ride

- [ ] Clutch: in a higher gear at low RPM, open the throttle firmly. If RPM rises but speed does not, the clutch slips.
- [ ] Shifting: every gear, up and down. Watch for false neutrals or jumping out of gear.
- [ ] Brakes: firm lever and pedal, straight stops, no pulsing.
- [ ] Handling: no wobble or pull with relaxed hands on a straight road.
- [ ] Throttle: smooth pickup, no stumbling, and the throttle snaps closed on its own.
- [ ] After the ride: look under the bike again for fresh leaks and check that the cooling fan runs when hot (liquid-cooled bikes).

Questions to ask the seller

- [ ] How long have you owned it, and why are you selling?
- [ ] Has it ever been dropped, laid down or in an accident?
- [ ] Do you have service records? When was the last oil change?
- [ ] When were the valve clearances last checked?
- [ ] How old are the tires, chain and battery?
- [ ] What modifications have been made, and do you have the original parts?
- [ ] Have all recalls been done by a dealer?
- [ ] Is the title in your name, and is there a loan on it?
- [ ] Has it been stored outside or through winters without being ridden?

Red flags: walk away if you see these

- The title is not in the seller's name, or the VIN does not match.
- The seller warmed the bike up before you arrived and will not let you see a cold start.
- The seller refuses a test ride with cash in hand or a second rider present.

- Fresh paint, new levers and new mirrors on one side only (a hidden crash).
- Milky oil, steady blue smoke, or a clutch that slips on the test ride.
- A story that changes when you ask the same question twice.

Price worksheet

List 5 to 10 comparable bikes (same model, similar year and miles) before you go.

Listing / source	Year	Miles	Asking $	Notes

Costs this bike will need soon (tires, chain, brakes, service, recall work, damage):

Listing / source	Year	Miles	Asking $	Notes

Negotiation script

- Before you go, find 5 to 10 comparable listings (same model, similar year and miles) and note their asking prices on the worksheet.
- Write down every item from your inspection that will cost money: tires, chain and sprockets, brake pads, overdue service, recall work, damaged parts. Get a rough price for each.
- Open with the facts, not a lowball: "It needs tires and a chain soon, which is about $X. Comparable bikes are listed at $Y. I can do $Z today."
- Stay quiet after your offer. Let the seller answer.
- Decide your walk-away price before you arrive and stick to it. There is always another bike.

Important

This kit helps you ask better questions and spot common problems. It is not a mechanical inspection and cannot tell you whether a specific motorcycle is safe. If you are unsure, pay a qualified mechanic for a pre-purchase inspection or walk away. Recall data comes from NHTSA; confirm open recalls for the exact VIN with a dealer or at nhtsa.gov/recalls.