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1968 Triumph Bonneville Buyer's Guide

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IRONHEAD

1968 T120 Bonneville

Factory-Correct Restoration Guide

KEY FACTS AT A GLANCE

- **Model year covered:** 1968 only (T120 Bonneville; T120R in the US). The year of the Amal Concentric and the twin-leading-shoe front brake. This guide does not cover the 1967 or 1969 T120 except where differences are explicitly noted.
- **Engine:** 649 cc air-cooled OHV parallel twin; 71.0 mm x 82.0 mm bore x stroke; unit construction with 4-speed gearbox. New Hepolite pistons, modified outer valve springs, improved oil supply to the camshafts (Bonhams).
- **Fuel system:** Twin Amal CONCENTRIC carburetors — NEW for 1968 (all models).
- **Ignition:** Battery-and-coil breaker-point ignition; subtle ignition changes for 1968 (Bonhams).
- **Electrics:** 12-volt.
- **Transmission:** 4-speed constant-mesh, in unit; subtle gearbox changes for 1968 (Bonhams); chain primary; wet multi-plate clutch; chain final drive.
- **Brakes:** 8-inch TWIN-LEADING-SHOE front brake — NEW for 1968 (debuted on the track at the 1967 Brands Hatch 500-mile race, per Bonhams); ventilated brake housings front and rear.
- **Frame:** Thicker frame tubing introduced during the 1968 model year (Bonhams) — verify by engine number.
- **Suspension:** New front fork with improved damping (Bonhams); strengthened swingarm pivot lug and longer swingarm (Bonhams).
- **Wheels/tires:** Wire-spoked wheels; 3.25 x 19 front, 3.50 x 18 rear (period fitment).
- **Frame/engine serials:** DU66246 through DU85903 (19,658 numbers allocated). Engine number on the left crankcase below the barrel; engine and frame numbers should match.
- **Power:** 49 bhp (Hagerty).
- **Documented color:** Hi-Fi Scarlet — documented on a 1968 US-market T120R (Hagerty), with a 2.5-gallon tank and black seat with chrome trim.
- **Production context:** DU66246-DU85903 bounds the run. US sales expectations for the year were 35,000 units across the range (Bonhams, from period reports).

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This is a single-year guide. It covers the 1968 Triumph T120 Bonneville only. Other model years are discussed solely to mark differences — for a different year, use that year's IronHead guide.

1. Manufacturer history: Triumph

Triumph began as a bicycle and motorcycle maker in Coventry, England, founded by the German immigrant Siegfried Bettmann in the 1880s; the company built its first motorcycle in 1902. Through the 1920s Triumph was one of Britain's major motorcycle manufacturers, and in 1936 the arrival of designer Edward Turner changed the company's trajectory permanently: his 1937/38 Speed Twin — a 500 cc parallel twin — created the template (light, narrow, good-looking twin with real performance) that the whole British industry, and then the Japanese, would chase for the next forty years.

Bombing forced the move from Coventry to a new factory at Meriden in 1942, and in 1951 Triumph was sold to the BSA group. The 1950s and 1960s were the boom years: the 650 twins (Thunderbird, Tiger, Bonneville) sold in huge numbers, overwhelmingly to the United States — more than 65 percent of Bonneville production went to America, a figure Hagerty's marque history repeats across its model summaries. The American market's appetite for the big parallel twin is the reason the Bonneville exists in the form it does: tuned for US tastes, styled for US showrooms, and sold through legendary importers like Johnson Motors (JoMo) on the West Coast and the Triumph Corporation (TriCor) in the East.

The 1970s brought the collapse. Mismanagement, labor strife, and Japanese competition pushed BSA/Triumph to the brink; the 1973 creation of Norton Villiers Triumph (NVT) was followed by an 18-month workers' sit-in at Meriden (Hagerty), after which the factory continued as the Meriden Workers' Co-operative — owner-workers building essentially the same motorcycles with almost no development money. Production limped on until 1983, when the Meriden works closed and the rest of Triumph's motorcycle production ended with it. Businessman John Bloor bought the name and assets the same year; his new Hinckley company would eventually relaunch the Bonneville in 2001, but the Meriden-built line this guide covers died in 1983.

For the restorer, that history explains the parts landscape: enormous US sales mean used parts and pattern parts are plentiful for the popular years; the co-operative years (1975-1983) mean running changes, mixed fittings, and documentation gaps that demand verification against the factory parts books rather than memory.

2. Model history: the Bonneville

The Bonneville began in 1959 as the T120: a 650 cc pre-unit parallel twin, essentially a twin-carburettor Tiger 110, named for the land-speed records Johnny Allen set on the Bonneville Salt Flats in 1956 aboard a Triumph-powered streamliner. It was an instant hit in America, and for the next two decades the Bonneville was Triumph's flagship — the bike the company was known by.

Three mechanical generations matter for the restorer. The **pre-unit T120** (1959-1962) has a separate gearbox. The **unit 650** (1963-1972, covered by factory workshop manual 99-0883/0889 for 1963-1970) combines engine and gearbox in one crankcase casting — the engine most people picture when they hear "Bonneville." The **750 T140** (1973-1983) is a bored-and-developed descendant of the oil-in-frame 650, covered by the T140 factory repair manual. Within those generations, the year-to-year changes — carburetors, brakes, frames, electrics, shift side, paint — are exactly what this guide series isolates, one year at a time.

Two production facts anchor every guide in this series. First, Hagerty's marque history records that by the time the last 649 cc T120 was sold in 1972, production had reached **250,000 units** — the Bonneville was a mass-market machine, not an exotic. Second, the same source puts total T140 production at roughly **60,000 units** across 1973-1983. And more than 65 percent of all Bonneville production was sold in the United States, which is why US-specification details (US-only paint names, US-market fittings, the T120R designation for the US road model) dominate the restoration record.

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Designation	Years	What changed that matters
T120 Bonneville	1959-1962	650 cc pre-unit twin. Named for the 1956 Bonneville Salt Flats land-speed records.
T120 Bonneville (unit)	1963-1970	Unit construction (engine and gearbox in one casting) from 1963. 12-volt electrics from 1964. Amal Concentric carbs and 8-inch twin-leading-shoe front brake from 1968.
T120R/T120V (oil-in-frame)	1971-1972	Oil carried in the frame instead of a separate tank. 54 bhp @ 6,750 rpm. Five-speed option for 1972. Last of the 649 cc line: ~250,000 T120s built in total (Hagerty).
T140V Bonneville	1973-1978	750 twin (724 cc at launch, 744 cc shortly after). Five-speed, right-side shift to 1975, left-side shift and rear disc from 1976.
T140J Silver Jubilee	1977	Limited edition: 1,000 UK + 1,000 US machines (Bonhams).
T140E / T140D	1979-1980	E for emissions: parallel-port head, Amal MkII carbs, Lucas Rita electronic ignition. D Special: factory custom by Tom Higham.
T140ES Electro	1980-1983	Electric start alongside the kick starter.
T140LE Royal Wedding	1981	Limited edition for the Charles and Diana wedding; published build totals conflict (see Section 10).
T140AV	1981-1983	Anti-vibration rubber-mounted police/touring model.
T140 TSS / TSX	1982-1983	Eight-valve Weslake-derived head on the TSS (~60 bhp per Hagerty).
End of line	1983	Meriden closes. ~60,000 T140s built in total (Hagerty).

3. What makes the 1968 T120 Bonneville unique

The 1968 T120 is the most changed Bonneville since unit construction arrived in 1963 — the year Triumph answered its critics with new carburetion, a real front brake, and a strengthened chassis, all at once. Bonhams' account of the 1968 model (from a documented T120R) itemizes the program: twin Amal Concentric carburetors on all models, new Hepolite pistons, modified outer valve springs, improved oil supply to the camshafts, subtle ignition and gearbox changes, a thicker frame introduced during the model year, a new front fork with improved damping, a strengthened swingarm pivot lug with a longer swingarm, and the 8-inch twin-leading-shoe front brake with ventilated housings front and rear.

1968-only details:

- **Amal Concentrics.** The Monobloc is gone; twin Concentrics are the

factory fitment on every 1968. Jetting and setup are Concentric-specific — Monobloc knowledge does not transfer.

- **8-inch twin-leading-shoe front brake.** The brake that debuted in

racing at Brands Hatch in 1967 reached production for 1968. It is a visibly different unit from the 1967 brake — check the brake plate, actuating arms, and ventilated housing.

- **Thicker frame — introduced during the year.** Bonhams notes the

thicker tubing arrived mid-model-year, which means early-1968 and late-1968 frames differ. Verify frame details against the engine number in the parts book; do not assume all 1968 frames are the same.

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- **Fork, swingarm, engine internals.** The new fork (improved damping),

strengthened swingarm pivot lug, longer arm, Hepolite pistons, revised valve springs, and better camshaft oiling are all 1968-on items. A 1968 with 1967 internals is either an early-production bike (verify by engine number) or a mixed assembly.

- **Hi-Fi Scarlet.** Hagerty documents a 1968 US T120R in Hi-Fi Scarlet

with a 2.5-gallon tank and black seat with chrome trim — genuine evidence of the year's US colorway. Verify the complete palette in the parts book.

- **49 bhp.** Hagerty quotes 49 bhp for the 1968 T120 — up from the

mid-60s 46, reflecting the Concentrics and the breathing work.

1968 buyer cautions:

- **Mid-year frame change.** The thicker frame's introduction during the

year is the single most important 1968 verification point. Check the frame against the engine number; a thin-tube frame with a late-1968 engine number (or vice versa) needs explaining.

- **Brake originality.** The TLS brake is desirable and frequently

retrofitted to 1963-1967 bikes — and 1968 brake plates get swapped around. Verify the brake, fork, and frame as a consistent set.

- **US sales context.** Period reports cited by Bonhams put expected US

sales at 35,000 units — the Bonneville was at its commercial peak, and high production means running changes. Engine-number verification beats model-year assumption every time on this bike.

4. Decoding your 1968 Bonneville

DU66246 through **DU85903** — 19,658 numbers allocated (Lowbrow Customs). Engine number: left crankcase below the barrel. Frame number: steering head. Match expected; both inside the range for a genuine

1968. Because the thicker frame arrived mid-year, record the exact engine

number and check it against the parts-book breakpoints.

5. Engine — technical restoration data

The table below is the 1968 T120 Bonneville's technical core. Every figure is sourced; where no verified factory figure was found in the sources checked, the table says so explicitly rather than printing a plausible number. Use the factory workshop manual for your exact model as the final authority.

Specification	Detail
Engine	649 cc air-cooled OHV parallel twin, unit construction (new Hepolite pistons, revised valve springs, improved camshaft oiling)
Bore x stroke	71.0 mm x 82.0 mm
Compression ratio	Not printed: no verified factory figure found in the sources checked.
Carburetion	Twin Amal Concentric (NEW for 1968)
Ignition	Battery-and-coil, breaker points (revised for 1968)
Power	49 bhp (Hagerty)

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Specification	Detail
Gearbox	4-speed constant-mesh, in unit (revised for 1968)
Clutch / primary	Wet multi-plate clutch; chain primary drive
Final drive	Chain
Frame	Steel cradle — thicker tubing introduced DURING the 1968 model year
Front suspension	Telescopic fork, new with improved damping for 1968
Rear suspension	Twin Girling shock absorbers; strengthened swingarm pivot lug, longer swingarm
Front brake	8-inch twin-leading-shoe drum (NEW for 1968); ventilated housings
Rear brake	Drum; ventilated housing
Wheels	Wire-spoked, steel rims
Tires (period)	3.25 x 19 front, 3.50 x 18 rear
Electrics	12-volt
Fuel capacity	2.5-gallon tank documented on the US T120R (Hagerty); verify the full range in the parts book.

6. Transmission, clutch and primary drive

The 1968 runs a 4-speed constant-mesh, in unit (revised for 1968). Wet multi-plate clutch; chain primary drive. Final drive is by Chain. Rebuild practice is standard unit-twin work: inspect gear dogs and slots for rounding, replace bearings and seals as a set, check clutch-plate flatness and basket notching, and set the primary-chain tension and clutch adjustment to the factory manual before judging gearbox behavior.

7. Frame, suspension, wheels and brakes

Frame: Steel cradle — thicker tubing introduced DURING the 1968 model year. Front suspension: Telescopic fork, new with improved damping for 1968. Rear: Twin Girling shock absorbers; strengthened swingarm pivot lug, longer swingarm. Brakes: 8-inch twin-leading-shoe drum (NEW for 1968); ventilated housings front, Drum; ventilated housing rear. Wheels: Wire-spoked, steel rims. Wheel and brake originality is checked as a set — hub, brake plate or caliper, and fork fitment must all agree with the year's specification in Section 3.

8. Electrics, ignition and instruments

Ignition: Battery-and-coil, breaker points (revised for 1968). Carburetion: Twin Amal Concentric (NEW for 1968). Electrics: 12-volt. Fit a new wiring harness — original insulation is finished — rebuild or replace the switches, fit the correct battery, and test the charging system under load. Set timing to the factory manual before attempting any carburetion tuning.

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9. Paint, trim and finishes

Documented: Hi-Fi Scarlet on the US-market T120R, with a 2.5-gallon tank and black seat with chrome trim (Hagerty). Genuine evidence of the year's US colorway — verify the complete 1968 palette against the factory parts book and period brochures before paint.

10. Production and rarity

No published model-year split found. Allocation: **DU66246-DU85903** (19,658 numbers). Period reports cited by Bonhams put expected US sales at 35,000 units for the year — the Bonneville at its commercial peak. Total T120 production: 250,000 by 1972 (Hagerty).

11. Corrosion and wear areas to inspect

Check every one of these before committing to the restoration — they are the places 1968 Bonnevilles hide their expensive surprises.

- **Chrome:** rechroming expected.
- **Exhaust:** inside-out rot; check the high-pipe routing areas.
- **Frame:** steering head and the strengthened swingarm pivot lug — check welds and for crash damage.
- **Tank interior:** borescope before paint (2.5-gallon US tank).
- **Brake housings:** the ventilated housings trap moisture — inspect internals, not just the outside.
- **Electrics:** replace connectors and grounds.

12. Restoration sequence

Work in an order that never forces you to undo finished work. The sequence below is the standard professional order for a unit-twin Triumph; the notes flag where the 1968 T120 Bonneville needs special attention.

1. **Document everything first.** Photograph the complete bike from all sides,

then every assembly before you touch a fastener. Record the frame and engine numbers (see Section 4) and check them against the year ranges before spending money — a mis-described year is the most expensive restoration mistake.

2. **Assess, don't strip.** Inventory what's original, what's period-correct,

what's wrong-year, and what's missing. On a 1968, pay particular attention to the mid-year frame change and the 1968-only brake/carburetor set.

3. **Engine and gearbox out; frame inspection.** Check the frame for crash

damage, cracks at the steering head and swingarm pivot, and previous repairs. CRITICAL for 1968: determine whether the frame is the early thin-tube or the later thicker-tube type and verify it against the engine number — they must be consistent.

4. **Engine rebuild.** Split only as far as needed. Measure everything:

bore, crank journals, cam bushings, valve guides. Rebores on these barrels are routine, but match pistons to the measured clearance, not to the catalogue's optimism. Replace the sludge-trap plug's staking on the crank — a loose sludge trap destroys cranks.

5. **Gearbox and clutch.** Inspect dogs and slots for rounding, replace

bearings and seals as a set, check clutch-plate flatness and basket notching.

6. **Cycle parts.** Rebuild forks with new seals and correct oil; rebuild

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