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1981 Triumph Bonneville Buyer's Guide

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1981 T140E / T140ES / T140LE / T140AV Bonneville

Factory-Correct Restoration Guide

KEY FACTS AT A GLANCE

- **Model year covered:** 1981 only — the widest Bonneville range ever: T140E, T140ES Electro, T140LE Royal Wedding limited edition, and T140AV anti-vibration. This guide does not cover the 1980 or 1982 T140 except where differences are explicitly noted.
- **Engine:** 744 cc air-cooled OHV parallel twin; 76.0 mm x 82.0 mm bore x stroke; parallel-port head.
- **Fuel system:** Amal MkII on standard models; TWIN BING 32 mm CV (Type 94) carburetors on the Royal Wedding edition and appearing on electric-start/European models.
- **Ignition:** Lucas electronic ignition.
- **Electrics:** 12-volt; turn indicators standard.
- **Starting:** Kick on E; electric + kick on ES and LE.
- **Transmission:** 5-speed constant-mesh; LEFT-side shift. Chain primary; wet multi-plate clutch; chain final drive.
- **Frame:** Oil-bearing frame.
- **Brakes:** Front disc (twin front discs on the UK-spec Royal Wedding); rear disc (1980 relocated position).
- **Frame/engine serials:** Alpha-numeric: month letter + model-year code + sequential. Model-year code for 1981 is DA (Lowbrow Customs; note the B/DA ambiguity around 1980 — verify against Lowbrow's guide and the parts book).
- **T140LE Royal Wedding:** Limited edition for the 1981 marriage of Charles and Diana. Published build totals CONFLICT: 250 machines (125 US + 125 UK) per the standard marque account vs. '1 of 500' claimed in a dealer's advertisement. This guide prints both claims and does not pick one (see Section 10). LE features: electric start, Bing carburetors, ULO turn indicators, Marzocchi Strada rear shocks, chromed fuel tanks, owner's certificate signed by dealer and chairman.
- **T140AV:** Anti-vibration rubber-mounted model, built 1981-1983 (police/touring specification).
- **Production context:** The range fragments into specials as the co-operative fights for survival.

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This is a single-year guide. It covers the 1981 Triumph T140E / T140ES / T140LE / T140AV 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 1981 T140E / T140ES / T140LE / T140AV Bonneville unique

The 1981 range is the most fragmented in Bonneville history: four distinct Bonnevilles — the standard T140E, the electric-start T140ES, the T140LE Royal Wedding limited edition, and the T140AV anti-vibration model. For the restorer, 1981 is therefore four verifications, not one: each variant has its own equipment set, and mixing them is the year's characteristic error.

1981-only details:

- **T140LE Royal Wedding.** Built to commemorate the 1981 marriage of

Charles and Diana. The standard marque account (quoted by vintagebike.co.uk) describes: 250 machines (125 US + 125 UK — though a dealer's advertisement for a Royal Wedding bike claims "1 of 500," a direct conflict documented in Section 10); owner's certificate signed by the dealer and the Triumph chairman; electric starting; Bing carburetors; ULO turn indicators; Marzocchi Strada gas-oil rear shocks; American-made Morris alloy wheels and twin front discs on the UK version; chromed petrol tanks finished differently by market (UK: 4 gallon, plain badge, black scallops; export: 2 gallon, picture-frame badge, gold-lined smoked-blue scallops); "Royal Wedding 1981" tank badge; side panels lettered with the Prince of Wales's feathers. The LE is the most equipment-specific Bonneville ever built — verify a claimed LE feature by feature.

- **T140AV anti-vibration.** Rubber-mounted engine, police/touring

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specification, built 1981-1983. The AV's engine mounts, frame fittings, and equipment differ from the standard bike — verify AV identity by the mounts and numbers, not by badges.

- **Bing carburetors arrive.** Twin Bing 32 mm CV (Type 94) carbs appear

on the LE and on electric-start/European models — the beginning of the end for Amal on the Bonneville (Bings are documented on the 1983 T140ES as well). Verify which carburetion the specific variant left the factory with.

- **Model-year code DA** (Lowbrow Customs), with the noted B/DA ambiguity

around 1980.

1981 buyer cautions:

- **LE-identity fraud.** The Royal Wedding's trim is largely bolt-on

(badges, tank finish, seat, indicators, shocks, wheels), which makes standard-to-LE conversions straightforward and profitable. A genuine LE's value depends on verified identity: the certificate, the market-correct tank and scallops, the Morris wheels (UK), the twin discs (UK), and consistent numbers. Demand documentation.

- **The build-total conflict.** Do not repeat "250" or "500" as fact.

Both figures circulate with attribution (see Section 10); a seller who states either as certain is overstating the evidence.

- **Variant parts do not interchange as '1981 parts.'** E, ES, LE, and AV

equipment sets differ. Order and verify by variant, not by year.

4. Decoding your 1981 Bonneville

Alpha-numeric: **month letter + model-year code + sequential**, with **DA as the 1981 model-year code** per Lowbrow Customs — who also show B/DA ambiguity around 1980. Verify against Lowbrow's guide and the factory parts book. Prefixes distinguish T140E-, T140ES-, T140LE-, and T140AV- machines. Engine number: left crankcase below the barrel. Frame number: steering head. Match expected. For a claimed LE or AV, the prefix and numbers must be consistent with that variant's production.

5. Engine — technical restoration data

The table below is the 1981 T140E / T140ES / T140LE / T140AV 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	744 cc air-cooled OHV parallel twin; parallel-port head
Bore x stroke	76.0 mm x 82.0 mm
Compression ratio	Not printed: no verified 1981 factory figure found in the sources checked — use the manual.
Carburetion	Twin Amal MkII (standard); TWIN BING 32 mm CV Type 94 (LE and electric-start/European models)
Ignition	Lucas electronic ignition
Power	No separately verified 1981 factory power figure found in the sources checked
Gearbox	5-speed constant-mesh; LEFT-side shift
Clutch / primary	Wet multi-plate clutch; chain primary drive

SAMPLE EXCERPT — full guide available at the link on the cover sheet

Specification	Detail
Final drive	Chain
Frame	Oil-bearing frame
Front suspension	Telescopic fork
Rear suspension	Twin shock absorbers (LE: Marzocchi Strada gas-oil)
Front brake	Disc (single standard; TWIN discs on UK-spec LE)
Rear brake	Disc (1980 relocated position)
Wheels	Wire-spoked standard; LE (UK): American-made Morris alloy wheels
Electrics	12-volt; ULO turn indicators on LE
Starting	E: kick. ES/LE: electric + kick
Fuel capacity	LE: 4-gallon UK tank / 2-gallon export tank (chromed, market-specific scallops). Standard models: verify in the parts book.
T140AV	Anti-vibration rubber-mounted engine, police/touring spec (1981-1983)

6. Transmission, clutch and primary drive

The 1981 runs a 5-speed constant-mesh; LEFT-side shift. 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: Oil-bearing frame. Front suspension: Telescopic fork. Rear: Twin shock absorbers (LE: Marzocchi Strada gas-oil). Brakes: Disc (single standard; TWIN discs on UK-spec LE) front, Disc (1980 relocated position) rear. Wheels: Wire-spoked standard; LE (UK): American-made Morris alloy wheels. 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: Lucas electronic ignition. Carburetion: Twin Amal MkII (standard); TWIN BING 32 mm CV Type 94 (LE and electric-start/European models). Electrics: 12-volt; ULO turn indicators on LE. Starting: E: kick. ES/LE: electric + kick. 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

T140LE Royal Wedding: chromed tanks with market-specific finishes — UK: plain Triumph badge, black scallops echoing the side-panel color; export: picture-frame badge, gold-lined smoked-blue scallops (vintagebike.co.uk, quoting the standard marque account). **Standard 1981 models:** no factory-verified 1981 palette was found in the sources checked — verify in the parts book. Do not apply LE finishes to a standard bike.

10. Production and rarity

T140LE Royal Wedding — CONFLICT, printed honestly:

the standard marque account (via vintagebike.co.uk) says **250 machines (125 US + 125 UK)**; a dealer's advertisement for a Royal Wedding bike (justbikes.com.au) claims **"1 of 500."** The two figures cannot both be right, and this guide does not choose between them — verify any claimed LE against its certificate, numbers, and equipment, not against a total. No published model-year split found for the standard 1981 range. Total T140 production 1973-1983: ~60,000 (Hagerty).

11. Corrosion and wear areas to inspect

Check every one of these before committing to the restoration — they are the places 1981 Bonnevilles hide their expensive surprises.

- **LE trim:** chromed tanks, special badges, and scalloped paint are irreplaceable — assess originality before touching.
- **Morris mags (LE UK):** check for cracks and corrosion.
- **Bing carbs:** check slides, diaphragms, and bodies — CV parts are model-specific.
- **Frame interior:** oil-bearing frame — flush and verify clean.
- **Tank interior:** borescope before paint.
- **Top-end wear:** check valve guides (Hagerty's 50-mph smoke test).

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 1981 T140E / T140ES / T140LE / T140AV 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 1981, pay particular attention to verifying the exact variant (E / ES / LE / AV) before any other work — the variants' equipment sets differ.

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

damage, cracks at the steering head and swingarm pivot, and previous repairs. Oil-in-frame: flush and verify internally. AV: verify the rubber-mount frame fittings are the factory AV set.

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

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