

Torque Settings

ref.: Haynes Service & Repair Manual - Triumph Bonneville, T100, Speedmaster, America, Thruxton & Scrambler '01 - '12

1 Routine maintenance and servicing

Alternator cover bolts	9 Nm	80 lb-in	7 lb-ft
Chainguard screws	7 Nm	62 lb-in	5 lb-ft
Engine oil drain bolt	25 Nm	221 lb-in	18 lb-ft
Handlebar positioning bolts - Thruxton wth separate handlebars	11 Nm	97 lb-in	8 lb-ft
Handlebar clamp bolts - Thruxton wth separate handlebars	27 Nm	239 lb-in	20 lb-ft
Headlight mounting bolts - Bonneville, T100, Thruxton and Scrambler	10 Nm	89 lb-in	7 lb-ft
Headlight bracket mounting bolt - America and Speedmaster	27 Nm	239 lb-in	20 lb-ft
Headlight bracket pinch bolt - America and Speedmaster	27 Nm	239 lb-in	20 lb-ft
Engine oil filter	10 Nm	89 lb-in	7 lb-ft
Rear axle nut			
Bonneville, T100, Thruxton and Scrambler	85 Nm	752 lb-in	63 lb-ft
America and Speedmaster	110 Nm	974 lb-in	81 lb-ft
Spark plugs	20 Nm	177 lb-in	15 lb-ft
Sprocket cover bolts	9 Nm	80 lb-in	7 lb-ft
Steering head bearing adjuster nut pre-load (with service tool)	40 Nm	354 lb-in	30 lb-ft
Steering head bearing locknut (with service tool)	40 Nm	354 lb-in	30 lb-ft
Steering stem nut	90 Nm	797 lb-in	66 lb-ft
Top yoke fork clamp bolts			
Bonneville, T100, Thruxton and Scrambler	27 Nm	239 lb-in	20 lb-ft
America and Speedmaster	20 Nm	177 lb-in	15 lb-ft

2 Engine, clutch and transmission

Alternator cover bolts	10 Nm	89 lb-in	7 lb-ft
Balancer shaft retainer screws	12 Nm	106 lb-in	9 lb-ft
Breather rotor screws	12 Nm	106 lb-in	9 lb-ft
Cam chain guide blade bolts	10 Nm	89 lb-in	7 lb-ft
Cam chain tensioner blade nut	10 Nm	89 lb-in	7 lb-ft
Cam chain tensioner cap bolt	20 Nm	177 lb-in	15 lb-ft
Cam chain tensioner mounting bolts	9 Nm	80 lb-in	7 lb-ft
Camshaft drive gear shaft bolt			
Engine number up to 186916	10 Nm	89 lb-in	7 lb-ft
Engine number from 186917-on	28 Nm	248 lb-in	21 lb-ft
Camshaft holder bolts	10 Nm	89 lb-in	7 lb-ft
Camshaft oil feed pipe bolts	8 Nm	71 lb-in	6 lb-ft
Clutch cover bolts	10 Nm	89 lb-in	7 lb-ft
Clutch nut	105 Nm	929 lb-in	77 lb-ft
Clutch spring bolts	9 Nm	80 lb-in	7 lb-ft
Connecting rods - caps with nuts and bolts			
First stage	22 Nm	195 lb-in	16 lb-ft
Second stage	minus 140°	minus 140°	minus 140°
Third stage	10 Nm	89 lb-in	7 lb-ft
Fourth stage	14 Nm	124 lb-in	10 lb-ft
Fifth stage	plus 120°	plus 120°	plus 120°
Connecting rods - caps with bolts only.....			
First stage	14 Nm	124 lb-in	10 lb-ft
Second stage	plus 120°	plus 120°	plus 120°
Crankcase bolts			
Bonneville and T100 up to engine # 307173 and Thruxton, Scrambler, America and Speedmaster up to engine # 326093			
Initial setting - all bolts	10 Nm	89 lb-in	7 lb-ft
Final setting			
M10 x 118.5 mm silver bolts	40 Nm	354 lb-in	30 lb-ft
M10 x 118.5 mm green bolts	75°	75°	75°
M8 bolts	32 Nm	283 lb-in	24 lb-ft
Bonneville and T100 from engine number 307174 and Thruxton, Scrambler, America and Speedmaster from engine # 326094			
Initial setting - all bolts	10 Nm	89 lb-in	7 lb-ft
Final setting			

M10 x 120.5 mm bolts	75°	75°	75°
M8 bolts	32 Nm	283 lb-in	24 lb-ft
Cylinder head intake adapters	12 Nm	106 lb-in	9 lb-ft
Cylinder head 10 mm nuts			
Stage 1	20 Nm	177 lb-in	15 lb-ft
Stage 2	26 Nm	230 lb-in	19 lb-ft
Stage 3	28 Nm	248 lb-in	21 lb-ft
Stage 4	120°	120°	120°
Engine earth lead	28 Nm	248 lb-in	21 lb-ft
Engine mounting bolts			
Bonneville, T100, Thruxton and Scrambler			
Frame cradle section bolts			
up to VIN 333839 (black bolts)	45 Nm	398 lb-in	33 lb-ft
from VIN 333840 (silver bolts)	40 Nm	354 lb-in	30 lb-ft
Upper and lower rear mounting bolt nuts	80 Nm	708 lb-in	59 lb-ft
Upper and lower front mounting bolt nuts	80 Nm	708 lb-in	59 lb-ft
Bracket-to-cylinder head bolt nut	80 Nm	708 lb-in	59 lb-ft
Bracket-fo-frame bolt nut	22 Nm	195 lb-in	16 lb-ft
Cradle brace bolts	22 Nm	195 lb-in	16 lb-ft
America and Speedmaster			
Rear mounting bolt nut	80 Nm	708 lb-in	59 lb-ft
Cylinder head to bracket bolt nut	80 Nm	708 lb-in	59 lb-ft
Upper and lower front mounting bolt nuts	80 Nm	708 lb-in	59 lb-ft
Frame cradle section bolts			
up to VIN 333839 (black bolts)	55 Nm	487 lb-in	41 lb-ft
from VIN 333840 (silver bolts)	40 Nm	354 lb-in	30 lb-ft
Swingarm pivot bolt nut	110 Nm	974 lb-in	81 lb-ft
Swingarm pivot clamp bolts	45 Nm	398 lb-in	33 lb-ft
Front footrest mounting bracket bolts - America and Speedmaster	30 Nm	266 lb-in	22 lb-ft
Gearchange mechanism cover bolts	8 Nm	71 lb-in	6 lb-ft
Gearchange shaft centralising spring pin	23 Nm	204 lb-in	17 lb-ft
Gearchange stopper arm bolt	12 Nm	106 lb-in	9 lb-ft
Oil cooler fittings			
Feed pipe banjo bolts to cylinder head	30 Nm	266 lb-in	22 lb-ft
Feed pipe banjo bolts to cooler	45 Nm	398 lb-in	33 lb-ft
Return pipe banjo bolt to sump (early Bonneville and T100)	45 Nm	398 lb-in	33 lb-ft
Return pipe flare nut to joint piece	15 Nm	133 lb-in	11 lb-ft
Joint piece to sump	45 Nm	398 lb-in	33 lb-ft
Return pipe banjo bolt to cooler.....	45 Nm	398 lb-in	33 lb-ft
Cooler mounting bolts	8 Nm	71 lb-in	6 lb-ft
Oil pipe (external) to crankcase banjo bolt	30 Nm	266 lb-in	22 lb-ft
Oil pipe (internal) banjo bolts	8 Nm	71 lb-in	6 lb-ft
Oil pressure relief valve	15 Nm	133 lb-in	11 lb-ft
Oil pressure switch	13 Nm	115 lb-in	10 lb-ft
Oil pump bolts	12 Nm	106 lb-in	9 lb-ft
Oil strainer bolts	6 Nm	53 lb-in	4 lb-ft
Selector drum cam plate bolt	12 Nm	106 lb-in	9 lb-ft
Selector fork shaft retainer screw.....	12 Nm	106 lb-in	9 lb-ft
Sump bolts	12 Nm	106 lb-in	9 lb-ft
Starter clutch housing bolts	16 Nm	142 lb-in	12 lb-ft
Valve cover bolts	14 Nm	124 lb-in	10 lb-ft

3A Fuel and exhaust systems - carburettor models

Cylinder head intake adapters	12 Nm	106 lb-in	9 lb-ft
Exhaust system - Bonneville, T100 and Thruxton			
Downpipe flange nuts	19 Nm	168 lb-in	14 lb-ft
Downpipe rear bolts	22 Nm	195 lb-in	16 lb-ft
Front sprocket cover bolts	9 Nm	80 lb-in	7 lb-ft
Joint pipe clamp bolt	22 Nm	195 lb-in	16 lb-ft
Passenger footrest holder nut/silencer mount	27 Nm	239 lb-in	20 lb-ft
Rider's footrest bracket mounting bolts	27 Nm	239 lb-in	20 lb-ft
Rider's footrest bracket clamp bolt	45 Nm	398 lb-in	33 lb-ft

Silencer clamp bolt	22 Nm	195 lb-in	16 lb-ft
Exhaust system - America and Speedmaster			
Downpipe flange nuts	19 Nm	168 lb-in	14 lb-ft
Downpipe rear bolts	15 Nm	133 lb-in	11 lb-ft
Joint pipe clamp bolt.....	22 Nm	195 lb-in	16 lb-ft
Passenger footrest plate bolts/silencer mount	27 Nm	239 lb-in	20 lb-ft
Silencer clamp bolt	22 Nm	195 lb-in	16 lb-ft
Exhaust system - Scrambler			
Exhaust pipe flange nuts	19 Nm	168 lb-in	14 lb-ft
Exhaust pipe assembly mounting bolt	19 Nm	168 lb-in	14 lb-ft
Exhaust pipe and silencer clamp bolts	10 Nm	89 lb-in	7 lb-ft
Silencer to bracket bolts	15 Nm	133 lb-in	11 lb-ft
Silencer bracket bolt	15 Nm	133 lb-in	11 lb-ft
Fuel tank mounting bolt(s)			
Bonneville, T100, Thruxton and Scrambler	9 Nm	80 lb-in	7 lb-ft
America and Speedmaster	19 Nm	168 lb-in	14 lb-ft
Throttle cable housing/master cylinder clamp bolts	12 Nm	106 lb-in	9 lb-ft

3B Fuel and exhaust systems - EFI models

Fuel pump mounting plate bolts	9 Nm	80 lb-in	7 lb-ft
Fuel tank mounting bolts	9 Nm	80 lb-in	7 lb-ft
Intake stub screws	12 Nm	106 lb-in	9 lb-ft
Oil temperature sensor	18 Nm	159 lb-in	13 lb-ft
Oxygen sensors	25 Nm	221 lb-in	18 lb-ft
Throttle body joining bolt nuts	6 Nm	53 lb-in	4 lb-ft
Throttle cable housing/master cylinder clamp bolts			
Bonneville up to VIN 380776, T100 and Thruxton	12 Nm	106 lb-in	9 lb-ft
America and Speedmaster	15 Nm	133 lb-in	11 lb-ft
Exhaust system			
Silencer to frame bolt - 2011-on America and Speedmaster	15 Nm	133 lb-in	11 lb-ft
All other fasteners	refer to Chapter 3A Specifications		

4 Ignition system

Alternator cover bolts	9 Nm	80 lb-in	7 lb-ft
Front footrest mounting bracket bolts - America and Speedmaster	30 Nm	266 lb-in	22 lb-ft
Pick-up coil/CKP sensor screws	10 Nm	89 lb-in	7 lb-ft

5 Frame, suspension and final drive

Clutch lever bracket clamp bolts	15 Nm	133 lb-in	11 lb-ft
Brake pedal pivot bolt			
Bonneville and T100	15 Nm	133 lb-in	11 lb-ft
America and Speedmaster	30 Nm	266 lb-in	22 lb-ft
Thruxton	22 Nm	195 lb-in	16 lb-ft
Scrambler	27 Nm	239 lb-in	20 lb-ft
Footrest mounting nut	17 Nm	150 lb-in	13 lb-ft
Fork clamp bolts			
Bonneville, T100, Thruxton and Scrambler			
Top and bottom yokes	27 Nm	239 lb-in	20 lb-ft
America and Speedmaster			
Top yoke - up to 2010	26 Nm	230 lb-in	19 lb-ft
Top yoke - 2011-on	24 Nm	212 lb-in	18 lb-ft
Bottom yoke	45 Nm	398 lb-in	33 lb-ft
Fork damper rod bolt			
Bonneville, T100, Thruxton and Scrambler	30 Nm	266 lb-in	22 lb-ft
America and Speedmaster	43 Nm	381 lb-in	32 lb-ft
Fork top bolt	23 Nm	204 lb-in	17 lb-ft
Front brake master cylinder clamp bolts	15 Nm	133 lb-in	11 lb-ft
Front sprocket cover bolts	9 Nm	80 lb-in	7 lb-ft
Front sprocket nut	132 Nm	1168 lb-in	97 lb-ft
Handlebar end-weights	5 Nm	44 lb-in	4 lb-ft
Handlebar clamp bolts - Bonneville, T100, America, Speedmaster, Scrambler.....	26 Nm	230 lb-in	19 lb-ft
Handlebar clamp bolts - Thruxton	27 Nm	239 lb-in	20 lb-ft

Handlebar positioning bolts - Thruxton	11 Nm	97 lb-in	8 lb-ft
Handlebar holder nuts (holder-to-top yoke)			
Bonneville, T100, Scrambler and Thruxton with high handlebars	35 Nm	310 lb-in	26 lb-ft
America and Speedmaster up to 2010	45 Nm	398 lb-in	33 lb-ft
America 2011-on	35 Nm	310 lb-in	26 lb-ft
Handlebar holder bolts (holder-to-top yoke) - 2011-on Speedmaster	62 Nm	549 lb-in	46 lb-ft
Rear shock absorber mounting bolts	28 Nm	248 lb-in	21 lb-ft
Rear sprocket carrier studs	30 Nm	266 lb-in	22 lb-ft
Rear sprocket nuts			
Bonneville, T100, Thruxton and Scrambler	55 Nm	487 lb-in	41 lb-ft
America and Speedmaster	85 Nm	752 lb-in	63 lb-ft
Rider's footrest bracket mounting bolts - Bonneville, T100 and Thruxton	27 Nm	239 lb-in	20 lb-ft
Sidestand pivot bolt	20 Nm	177 lb-in	15 lb-ft
Sidestand pivot bolt nut	25 Nm	221 lb-in	18 lb-ft
Steering head bearing adjuster nut pro-load (with service tool)	40 Nm	354 lb-in	30 lb-ft
Steering head bearing locknut (with service tool)	40 Nm	354 lb-in	30 lb-ft
Steering stem nut	90 Nm	797 lb-in	66 lb-ft
Swingarm pivot clamp bolts - Bonneville, T100, Thruxton and Scrambler			
Up to VIN 333839	45 Nm	398 lb-in	33 lb-ft
From VIN 333840	40 Nm	354 lb-in	30 lb-ft
Swingarm pivot clamp bolts - America and Speedmaster	40 Nm	354 lb-in	30 lb-ft
Swingarm pivot bolt nut	110 Nm	974 lb-in	81 lb-ft

6 Brakes, wheels and tyres

Bleed valves	6 Nm	53 lb-in	4 lb-ft
Brake hose banjo bolts	25 Nm	221 lb-in	18 lb-ft
Brake pad retaining pins (front and rear)	18 Nm	159 lb-in	13 lb-ft
Front axle bolt - America and 2003 to 2010 Speedmaster	60 Nm	531 lb-in	44 lb-ft
Front axle — Speedmaster 2011-on	95 Nm	841 lb-in	70 lb-ft
Front axle clamp bolt(s)			
Bonneville, T100, Thruxton and Scrambler	27 Nm	239 lb-in	20 lb-ft
America and Speedmaster	22 Nm	195 lb-in	16 lb-ft
Front axle nut - Bonneville, T100, Thruxton and Scrambler	60 Nm	531 lb-in	44 lb-ft
Front brake caliper mounting bolts	28 Nm	248 lb-in	21 lb-ft
Front brake disc bolts	22 Nm	195 lb-in	16 lb-ft
Front brake master cylinder clamp bolts	12 Nm	106 lb-in	9 lb-ft
Rear axle nut			
Bonneville, T100, Thruxton and Scrambler	85 Nm	752 lb-in	63 lb-ft
America and Speedmaster	110 Nm	974 lb-in	81 lb-ft
Rear brake caliper mounting bolts	40 Nm	354 lb-in	30 lb-ft
Rear brake disc bolts	22 Nm	195 lb-in	16 lb-ft
Rear brake light switch	15 Nm	133 lb-in	11 lb-ft
Rear brake master cylinder mounting bolts			
Bonneville and T100	18 Nm	159 lb-in	13 lb-ft
Thruxton, Scrambler, America and Speedmaster	16 Nm	142 lb-in	12 lb-ft

8 Electrical System

Alternator cover bolts	9 Nm	80 lb-in	7 lb-ft
Alternator rotor bolts			
M10 bolt	98 Nm	867 lb-in	72 lb-ft
M12 bolt	120 Nm	1062 lb-in	89 lb-ft
Alternator stator and wiring clamp bolts	12 Nm	106 lb-in	9 lb-ft
Front footrest mounting bracket bolts - America and Speedmaster	27 Nm	239 lb-in	20 lb-ft
Neutral switch	10 Nm	89 lb-in	7 lb-ft
Oil pressure switch	13 Nm	115 lb-in	10 lb-ft
Rear brake light switch	15 Nm	133 lb-in	11 lb-ft
Starter motor mounting bolts	10 Nm	89 lb-in	7 lb-ft

Overall Min	5 Nm	44 lb-in	4 lb-ft
Overall Max	132 Nm	1168 lb-in	97 lb-ft