CONTENTS

Full Specification		790 cc Bonneville/T100	790 cc America/Speedmaster
Barrels and Pistons			
Cylinder Bore Dia.		85.991 to 86.009 mm (std) 86.034 mm (service limit)	85.991 to 86.009 mm (std) 86.034 mm (service limit)
Piston Diameter - standard		85.975 to 85.990 mm	85.975 to 85.990 mm
Piston Diameter - service limit		85.935 mm	85.935 mm
Piston Ring to Groove Clearance		0.02 mm to 0.06 mm (std) 0.075 mm (service limit)	0.02 mm to 0.06 mm (std) 0.075 mm (service limit)
Piston Ring Groove Width	Top	1.01 to 1.03 mm	1.01 to 1.03 mm
	Second	1.01 to 1.03 mm	1.01 to 1.03 mm
	Oil	2.01 to 2.03 mm	2.01 to 2.03 mm
Piston Ring End Gap in Bore	Top	0.15 mm to 0.30 mm	0.15 mm to 0.30 mm
	Second	0.30 mm to 0.45 mm	0.30 mm to 0.45 mm
	Oil	0.20 mm to 0.70 mm	0.20 mm to 0.70 mm
Gudgeon Pin Bore Dia. In Piston		19.002 to 19.008 mm (std) 19.036 mm (service limit)	19.002 to 19.008 mm (std) 19.036 mm (service limit)
Gudgeon Pin Dia.		18.995 to 19.000 mm (std) 18.985 (service limit)	18.995 to 19.000 mm (std) 18.985 (service limit)
Primary Drive			
Primary Drive	Type	Gear	Gear
	Reduction Ratio	1.74:1 (62/108)	1.74:1 (62/108)
Clutch			
Steel Plate Warpage Limit		Less than 0.15 mm	Less than 0.15 mm
Friction Plate Thickness		3.22 to 3.38 mm (std) 2.72 (service limit)	3.22 to 3.38 mm (std) 2.72 (service limit)
Clutch Actuation Method		Cable	Cable
Cable Free Play (at lever)		2 to 3 mm	2 to 3 mm
Crankshaft/Connecting rod			
Big End Journal Dia		40.946 to 40.960 (std) 40.932 mm (service limit)	40.946 to 40.960 (std) 40.932 mm (service limit)
Big End Bearing Clearance		0.036 mm to 0.066 mm (std) 0.1 mm (service limit)	0.036 mm to 0.066 mm (std) 0.1 mm (service limit)
Main Bearing Journal Dia		37.960 to 37.976 (std) 37.936 mm (service limit)	37.960 to 37.976 (std) 37.936 mm (service limit)
Main Bearing Clearance		0.019 mm to 0.044 mm (std) 0.1 mm (service limit)	0.019 mm to 0.044 mm (std) 0.1 mm (service limit)
Crankshaft Endfloat		0.05 to 0.20 mm (std) 0.40 mm (service limit)	0.05 to 0.20 mm (std) 0.40 mm (service limit)
Connecting Rod Small End Dia.		19.016 to 19.034 mm (std) 19.040 mm (service limit)	19.016 to 19.034 mm (std) 19.040 mm (service limit)
Connecting Rod Big End Side Clearance		0.15 to 0.30 mm (std) 0.50 mm (service limit)	0.15 to 0.30 mm (std) 0.50 mm (service limit)

Full Specification	790 cc Bonneville/T100	790 cc America/Speedmaster
Carburettors		
Type	Keihin CVK 36	Keihin CVK 36
Main Jet	110	120
Pilot Jet	40	42
Starter Jet	52	52
Main Air Jet	80	80
Needle	NAGB	NBAD
Float Height	17.0 ± 1 mm	17.0 ± 1 mm
Fuel Level	2.0 ± 1 mm above float chamber surface	2.0 ± 1 mm above float chamber surface
Suspension		
Front Fork Travel	120 mm	130 mm
Recommended Fork Oil Grade	Kayaba G10	Kayaba G10
Oil Level (fork fully compressed)	120 mm below inner tube upper surface	166 mm below inner tube upper surface
Oil Volume (dry fill)	484 cc	484 cc
Rear Wheel Travel	105 mm	96 mm
Rear Suspension Bearing Grease	Mobil Grease HP 222	Mobil Grease HP 222
Brakes		
Pad Friction Material Minimum Thickness	1.5 mm (front and rear)	1.5 mm (front and rear)
Front Disc Dia.	310 mm	310 mm
Front Disc Thickness	5.0 mm (service limit 4.5mm)	5.0 mm (service limit 4.5mm)
Front Disc Run-out - standard	Less than 0.15 mm	Less than 0.15 mm
Front Disc Run-out - service limit	0.30 mm	0.30 mm
Rear Disc Thickness	6.0 mm (service limit 5.0mm)	6.0 mm (service limit 5.0mm)
Rear Disc Dia	255 mm	285 mm
Rear Disc Run-out - standard	Less than 0.15 mm	Less than 0.15 mm
Rear Disc Run-out - service limit	0.30 mm	0.30 mm
Recommended Fluid	Mobil Universal Brake Fluid DOT4	Mobil Universal Brake Fluid DOT4
Wheels and Tyres		
Wheel Rim Axial Run-out	0.6 mm	0.6 mm
Wheel Rim Radial Run-out	0.6 mm	0.6mm
Tyres	See owner's handbook	See owner's handbook
Tyre Pressures	See section 14	See section 14
Front Tyre Tread Depth min.	2.0 mm	2.0 mm
Rear Tyre Tread Depth min.	2.0 mm (3.0 mm > 80 mph/130 kmh)	2.0 mm (3.0 mm > 80 mph/130 kmh)

WARNING: Triumph motorcycles must not be operated above the legal road speed limit except in authorised closed course conditions.

Full Specification		865 cc Bonneville T100	865 cc Speedmaster
Transmission			
Type		5 Speed Constant Mesh	5 Speed Constant Mesh
Gear Ratios	1st	2.73:1 (41/15)	2.73:1 (41/15)
	2nd	1.95:1 (37/19)	1.95:1 (37/19)
	3rd	1.55:1 (34/22)	1.55:1 (34/22)
	4th	1.29:1 (31/24)	1.29:1 (31/24)
	5th	1.07:1 (29/27)	1.07:1 (29/27)
Gear Selector Fork Thickness		5.8 to 5.9 mm (service limit 5.7 mm)	5.8 to 5.9 (service limit 5.7 mm)
Gear Selector Groove Width		6.0 to 6.1 mm (service limit 6.2 mm)	6.0 to 6.1 mm (service limit 6.2 mm)
Final Drive		Chain	Chain
Final Drive Ratio		2.39:1 (18/43)	2.687:1 (16/43)
Chain Type		DID 525 VM2 (102 link)	DID 525 VM2 (112 link)
20 Link Length		Less than 321 mm	Less than 321 mm
Drive Chain Freeplay		25-35 mm	20-30 mm
Chain Lubrication		Mobil chain spray	Mobil chain spray
Lubrication			
Oil Capacity (approximate)			
	Dry fill	4.5 litres	4.5 litres
	Oil & filter change	3.8 litres	3.8 litres
	Oil change only	3.3 litres	3.3 litres
Recommended Oil		See lubrication section	See lubrication section
Oil Pressure (in main gallery)		40 psi @ 4000 rpm)@ 80°C Oil Temp)	40 psi @ 4000 rpm (@ 80°C Oil Temp)
Oil Pump Rotor Tip Clearance		Less than 0.15 mm (std)	Less than 0.15 mm (std)
		0.20 mm (service limit)	0.20 mm (service limit)
Oil Pump Body Clearance		0.15 to 0.22 mm (std)	0.15 to 0.22 mm (std)
		0.35 mm (service limit)	0.35 mm (service limit)
Oil Pump Rotor End Float		0/02 to 0.07 mm (std)	0.02 to 0.07 mm (std)
		0.10 mm (service limit)	0.10 mm (service limit)
Ignition System			
Type		Digital Inductive	Digital Inductive
Electronic Rev-Limiter		8000 rpm	8000 rpm
Pick Up Coil Air Gap		1.0 mm ±0.2 mm	1.0 mm ±0.2 mm
Spark Plug Type		NGK DPR8EA-9	NGK DPR8EA-9
Spark Plug Gap		0.8 to 0.9 mm	0.8 to 0.9 mm
Fuel System			
Fuel Type		Unleaded, 95 RON (U.S. 89 CLC/AKI)	Unleaded, 95 RON (U.S. 89 CLC/AKI)
Fuel Tank Capacity		16.0 Litres	16.6 Litres
Idle Speed		1000 ±50 rpm	1000 ±50 rpm
Idle Mixture Adjustment		See Section 9	See Section 9

CONNECTING RODS

NOTE:

- **New connecting rod big-end fixings will be required on installation.**

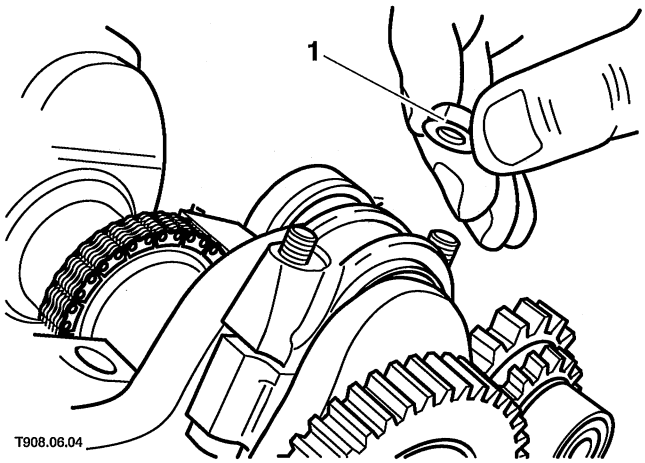
Removal

1. Disassemble the crankcase halves.
2. Rotate the crankshaft to bring each piston to BDC.

NOTE:

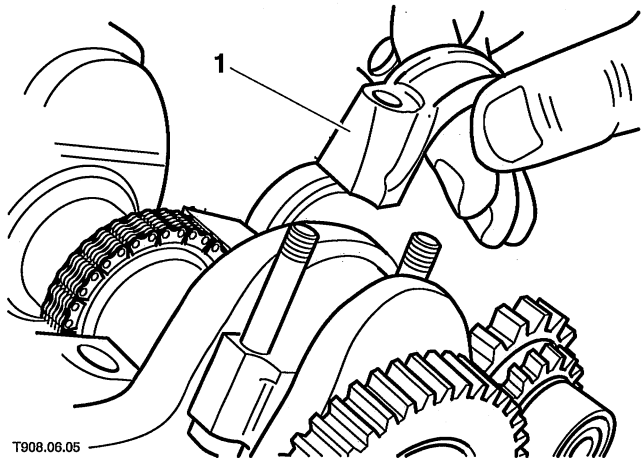
- **This must be done one-at-a-time on America, Scrambler and Speedmaster engines.**

3. Mark each connecting rod big-end cap to show its correct fitted location and orientation prior to removal (see installation for details of rod markings).
4. Evenly and progressively slacken and remove the big-end cap nuts/bolts.



1. Big-end cap nut

6. Remove the big-end cap, complete with the lower bearing shell and remove the connecting rod, complete with the upper bearing shell.



1. Big-end cap

7. Reassemble the rod and cap, complete with bearings, to keep all components together.

NOTE:

- **If both connecting rods are being removed, mark each rod in some way to ensure it is refitted in its original location.**

Inspection

1. Remove the bearing shells and inspect for damage, wear, overheating (blueing) and any other signs of deterioration. Fit a new set of big-end bearing shells if damage, wear, overheating or deterioration is found.