

## Suspension and Steering, Mk1/2

Fastener	Torque (lbft)	Torque (kgm)
Drive shaft coupling U bolts (rubber cross inner joints)	8 to 12	1.11 to 1.66
Drive shaft nut (front hub, drum brakes). <i>Continue tightening until next split pin slot aligns. Do not slacken off until the next slot aligns!</i>	60	8.3
Tie rod to front sub-frame	20 to 24	2.8 to 3.3
Tie rod to lower front suspension wishbone	17 to 20	2.8 to 3.3
Front suspension upper support arm pivot shaft nut	45 to 60	6.2 to 8.3
Front suspension lower wishbone pivot shaft nut	30 to 35	4.1 to 4.8
Wheel nuts	40 to 45	5.5 to 6.2
Steering column/rack pinion clamp bolt	8 to 10	1.11 to 1.38
Steering arm to swivel hub	30 to 35	4.1 to 4.8
Steering track-rod end to steering arm	20 to 24	2.8 to 3.3
Steering-wheel nut	32 to 37	4.5 to 5.1
Swivel hub ball joint socket	70 to 80	9.6 to 11.1
Swivel hub ball joint to suspension arms	35 to 40	4.8 to 5.5
Track rod end to steering rack lock nut	35 to 40	4.8 to 5.5
Steering rack U-bolts to floor	10 to 12	1.4 to 1.7
Steering-column clip bracket to column clip and parcel shelf	13 to 18	1.8 to 2.5
Rear suspension rear hub nut. <i>Continue tightening until next split pin slot aligns. Do not slacken off until the next slot aligns!</i>	60	8.3
Rear radius arm pivot shaft nut	45 to 60	6.2 to 8.3
Backplate to rear radius arm bolts	18 to 22	2.5 to 3.0

## Suspension and Steering, Mini Cooper 997/998cc

Fastener	Torque (lbft)	Torque (kgm)
Caliper retaining bolts	35 to 40	4.8 to 5.5

Steering Lever ball joint	25 to 30	3.4 to 4.1
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### Suspension and Steering, Mini Cooper S Mk1-3

Fastener	Torque (lbft)	Torque (kgm)
Drive Shaft Nut. <i>Continue tightening until next split pin slot aligns. Do not slacken off until the next slot aligns!</i>	150	20.7

### Electrical Components

Fastener	Torque (lbin)	Torque (kgm)
Alternator (11AC) Brush box fixing screws	10	0.115
Alternator (11AC) Diode heat sink fixings	25	0.288
Alternator (11AC) through-bolts	45 to 50	0.518 to 0.576
Alternator (16ACR) Shaft nut	25 to 30	3.5 to 4.2
Distributor Clamp Bolt (fixed nut type)	50	0.576
Distributor Clamp Bolt (fixed bolt type)	30	0.345

### Engine (848cc, 998cc)

Fastener	Torque (lbft)	Torque (kgm)
Camshaft Nut	60 to 70	8.3 to 9.7
Con Rod Big-end Bolts	35 to 38	4.8 to 5.3
Crankshaft Pulley Nut	70 to 80	9.7 to 11.1
Cylinder Head Stud Nuts	40	5.5
Cylinder Side Cover	3 to 4	0.42 to 0.55
Clutch Spring Housing to Pressure Plate set screws	16	2.2

Driving Strap to Flywheel set screw	16	2.2
Flywheel Center Bolt	110 to 115	15.2 to 15.9
Flywheel Housing bolts and stud nuts	18	2.5
Gudgeon Pin Clamp Screws	22 to 25	3.0 to 3.5
Heater Control to Cylinder Head	6 to 8	0.83 to 1.11
Main Bearing set screws	60 to 65	8.3 to 9.0
Manifold to Cylinder Head	12 to 16	1.7 to 2.2
Oil Filter Brown Center Bolt	12 to 16	1.7 to 2.2
Oil Pump	6 to 9	0.83 to 1.25
Oil Pipe banjo	35 to 40	4.8 to 5.5
Oil Pressure Release Valve - dome nut	40 to 45	5.5 to 6.2
Rocker Cover	3 to 4	0.41 to 0.55
Rocker Shaft Bracket Nuts	22 to 25	3.0 to 3.5
Spark Plugs	18	2.5
Timing Cover and Front Plate 1/4in UNF bolts	4 to 6	0.55 to 0.83
Timing Cover and Front Plate 5/16in UNF bolts	10 to 14	1.4 to 1.9
Water Pump	14 to 18	1.9 to 2.5
Water Outlet Elbow	6 to 9	0.83 to 1.25
Thermal Transmitter	16	2.2

**Engine (970cc, 1071cc, 1275cc)**

*Use this data in conjunction with the data for Engine (850, 998cc)*

<b>Fastener</b>	<b>Torque (lbft)</b>	<b>Torque (kgm)</b>
Cylinder Head nuts (11 stud head)	42	5.8
Cylinder Head bolt (11 stud head)	25	3.5

Con Rod Big-end nuts (assemble dry only)	40	5.5
Main Bearing set screws (early type)	67	9.3
Main Bearing nuts (later type)	57	7.9

### Gearbox

<b>Fastener</b>	<b>Torque (lbft)</b>	<b>Torque (kgm)</b>
Third Motion Shaft bearing retainer screws	13	1.8
First Motion Shaft nut	150	20.7
Third Motion Shaft nut	150	20.7
Transmission Case to Crankcase	6	0.8
Transmission drain plug	25	3.5
Transmission case studs - 3/8in dia. UNC	8	1.1
Transmission case studs - 5/16in dia. UNC	6	0.8
Transmission case stud nuts 3/8in UNF	25	3.4
Transmission case stud nuts 5/16in UNF	18	2.5
Bottom Cover set screws 1/4in dia. UNC (change-speed tower)	6	0.8

### Final Drive

<b>Fastener</b>	<b>Torque (lbft)</b>	<b>Torque (kgm)</b>
Driven Gear to Differential Cage	60	8.3

Driving Flange to Differential nut ( <i>tighten to next split pin hole</i> )	70	9.6
Differential Housing End Cover bolts	18	2.5