OWNER'S MAINTENANCE MANUAL

ROVER 2000

PART No. 4817

OWNER'S MAINTENANCE MANUAL

ROVER 2000 SC
ROVER 2000 TC
ROVER 2000 AUTOMATIC

INCORPORATING FREE SERVICE
and MAINTENANCE SCHEDULES

THE ROVER COMPANY LIMITED
SOLIHULL
WARWICKSHIRE
ENGLAND

ROVER 2000

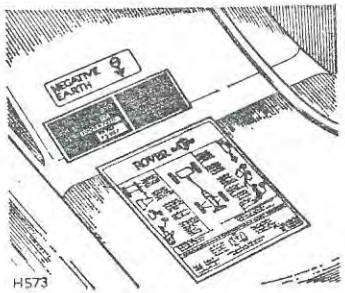
The Company reserves the right to alter specifications and design features without notice

Part No. 4817

H627

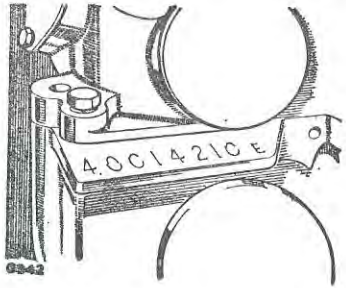
Serial numbers, all models

For your information the chassis serial number will be found on a plate affixed to the top of the right-hand wing valance, visible after the bonnet has been opened. This number should be quoted in all correspondence; the registration number of the car is of no use whatever to us.



Location of chassis serial number

The engine serial number is stamped on the right-hand side of the timing chain case. On early models the engine serial number is stamped on the right-hand side of the cylinder block, at the rear.



Location of engine serial number

PART THREE
GENERAL DATA

Engine, SC and automatic models

Bore	3.375 in. (8,57 cm)
Stroke	3.375 in. (8,57 cm)
Number of cylinders	Four
Cylinder capacity	120.8 cu.in. (1,978 c.c.)
Compression ratio: Standard	9.0 : 1
Certain export territories	7.5 : 1

	9.0:1 compression ratio	7.5:1 compression ratio
B.H.P.	99 at 5,000 r.p.m.	87,5 at 5,000 r.p.m.
Maximum torque:	121 lbs/ft (16,6 mkg) at 3,600 r.p.m.	113 lbs/ft (15 mkg) at 3,350 r.p.m.

Firing order	1, 3, 4, 2
Sparking plugs: 9.0:1 compression ratio	Champion N.9Y } 14 mm with suppressors
7.5:1 compression ratio	Champion N.5 } and waterproof covers
Sparking plug point gap	.025 in. (0,60 mm)
Distributor contact breaker gap	.014 to.016 in. (0,35 to 0,40 mm)
Ignition timing, static—full retard:	
9.0:1 compression ratio 95-97 octane fuel	4° B.T.D.C.*
7.5:1 compression ratio 79-93 octane fuel	6° B.T.D.C.
Valve timing (No. 1 exhaust valve peak)	108° B.T.D.C.

* Where 93 octane fuel is used set ignition timing to 2°B.T.D.C.

Engine, TC models

Bore	3.375 in. (8,57 cm)
Stroke	3.375 in. (8,57 cm)
Number of cylinders	Four
Cylinder capacity	120.8 cu.in. (1,978 cc)
Compression ratio:	
United Kingdom and North American Dollar Area	10.0:1
Other territories	9.0:1

	10.0:1 compression ratio	9.0:1 compression ratio
B.H.P.	124 at 5,500 r.p.m.	117 at 5,500 r.p.m.
Maximum torque	132 lbs/ft (18,2 mkg) at 4,000 r.p.m.	125 lbs/ft (17,2 mkg) at 3,750 r.p.m.

Firing order	1, 3, 4, 2
Sparking plugs: All models	Champion N.6Y (14 mm with suppressed cables and waterproof covers)
Sparking plug point gap	.025 in. (0,60 mm)
Distributor contact breaker gap	.014 to .016 in. (0,35 to 0,40 mm)
Ignition timing, static—full retard:	
10.0:1 compression ratio, 100 octane fuel	6° B.T.D.C.
9.0:1 compression ratio, 95 octane fuel	6° B.T.D.C.
Valve timing (No. 1 exhaust valve peak)	104° B.T.D.C.

Engine, all models

Tappet clearance—inlet	.008 in. (0,20 mm)
Tappet clearance—exhaust	.013 in. (0,30 mm)
Oil pressure	50 to 60 lb/sq.in. (3,5 to 4,2 kg/cm²) at 30 m.p.h. (50 k.p.h) in top gear with engine warm
Lubrication	Full pressure
Oil filter—internal	Gauze pump intake filter in sump
Oil filter—external	Full-flow, AC No. 7965022, type SC

Clutch, 4-speed gearbox

Type	Diaphragm spring single dry plate, 8½ in. diameter. Hydraulic operation
Fluid	Castrol Girling Brake and Clutch Fluid Crimson, Specification SAE 70 R.3.

Gearbox, 4-speed .... Single helical constant mesh with synchromesh on top, third, second and first speeds

Gearbox, automatic transmission .... The automatic transmission consists of two main components:

1. A three-element hydrokinetic torque converter coupling capable of torque multiplication at an infinitely variable rate between 2:1 and 1:1.
2. A torque-speed responsive and hydraulically operated gearbox comprising a planetary gear set providing three forward ratios and reverse.

	4-speed		Automatic transmission	
Gear ratios	Top	1.0-1	High (top)	1.0:1
	3rd	1.391-1	Intermediate (second)	1.45:1
	2nd	2.133-1	Low (first)	2.39:1
	1st	3.625-1	Reverse	2.09:1
	Reverse	3.43-1		
Overall ratios	Top	3.54-1		
	3rd	4.924-1		
	2nd	7.55-1		
	1st	12.832-1		
	Reverse	12.14-1		

Final drive unit, all models

Type	Hypoid crown wheel and bevel pinion
Ratio	3.54:1

Propeller shafts, all models

Type	Open, Hardy Spicer type 1310, pre-packed joints

Fuel system, SC and automatic models

Fuel pump	AC mechanical
Carburetter	Single S.U. type H.S.6
Carburetter needle	RN
Air cleaner	AC paper element type

Fuel system, TC models

Fuel pump	AC mechanical
Carburetter	Twin S.U. type H.D.8
Carburetter needle	UI
Air cleaner	Twin paper element type

Cooling system, SC and automatic models

Type	Pump, fan and thermostat, pressurised to 7 lb/sq.in. (0,5 kg/cm²)
Fan belt adjustment	$\frac{5}{16}$ in. to $\frac{7}{16}$ in. (8 to 11 mm) free movement

Cooling system, sealed with expansion tank, TC models

Type	Pump, fan and thermostat, pressurised to 7 lb/sq.in. (0,5 kg/cm²)
Fan belt adjustment	$\frac{5}{16}$ in. to $\frac{7}{16}$ in. (8 to 11 mm) free movement

Electrical system, all models

Type	Early SC models, positive earth Late SC and all TC models, negative earth
Voltage	12 v.
Battery capacity	60 ampere hours at 20 hour rate. (Battery located under bonnet)
Ignition system	Coil, Lucas, HA 12
Charging circuit	Current-voltage regulator
Dynamo output	30 amps

Hydraulic dampers, all models .... Telescopic, anti-aeration, non-adjustable

Brakes, Dunlop type, early SC and TC models

Foot brake	Front; outboard disc brakes, Rear; inboard disc brakes — Hydraulic, servo-assisted. Self adjusting
Handbrake	Dunlop disc handbrake with mechanical linkage, self-adjusting mechanism
Fluid	Castrol Girling Brake and Clutch Fluid Crimson, Specification SAE 70 R.3.

Brakes, Girling type, late SC, TC models and all automatic models

Foot brake	Front; outboard disc brakes with twin pistons Rear; inboard disc brakes, single-side swinging caliper with single piston — Hydraulic, servo assisted. Self adjusting
Handbrake	Integral with rear foot brake. Mechanical linkage, self-adjusting mechanism
Fluid	Castrol Girling Brake and Clutch Fluid Crimson, Specification SAE 70 R.3

Steering, all models

Type	Adamant hour-glass worm and roller followers
Ratio	20.3:1, $3\frac{3}{4}$ turns, lock to lock
Front wheel alignment	$\frac{1}{8}$ in. (3,0 mm) toe-in plus or minus $\frac{1}{16}$ in. (1,5 mm)
Camber angle	$0° \pm 1°$ — Check with car in static unladen position. That is, car with water, oil and 5 gallons of fuel. Rock the car up and down at the front to allow it to take up a static position
Castor angle	$\frac{1}{4}°$ positive $\pm \frac{1}{2}°$
Swivel pin inclination....	8°

Note: The camber of the front wheels on this car is 0°, with a tolerance of plus or minus 1°. That is, the bottom of the wheels can splay out slightly.

Tyres, SC and automatic models

Size .... Pirelli Cinturato 165 x 14, tubeless or Dunlop SP41 165 SR 14 tubeless

Pressures: Check with tyres cold All speeds—	Normal loads		Fully laden	
	Front	Rear	Front	Rear
lb/sq.in.	26	28	26	32
kg/cm²	1,8	1,9	1,8	2,2

When high speed touring, the tyre pressures should be checked much more frequently even to the extent of a daily check.

Tyres, TC models

Size, pressed steel wheels .... Pirelli Cinturato 165 x 14 tubeless or Dunlop SP41 165 SR 14 tubeless

Wire wheels .... Pirelli Cinturato 165 x 14, with inner tube or Dunlop SP41 165 SR 14 with inner tube

Pressures: Check with tyres cold Up to speeds of 105 mph (165 kph)	Normal loads		Fully laden	
	Front	Rear	Front	Rear
lb/sq. in.	26	28	26	32
kg/cm²	1,8	1,9	1,8	2,2
When driving consistently at speeds of over 105 m.p.h. (165 kph)	Normal loads		Fully laden	
	Front	Rear	Front	Rear
lb/sq. in	30	32	30	36
kg/cm²	2,1	2,2	2,1	2,5

When high-speed touring, the tyre pressures should be checked much more frequently even to the extent of a daily check.

Replacement headlamp units and bulbs, all models

	Inner headlamp		Outer headlamp	
	Sealed beam unit	Bulb	Sealed beam unit	Bulb
Right-hand steering	Lucas 54522973 12v 50w	—	Lucas 54521806 12v 37½/50w	—
Left-hand steering, except France, Austria, Italy and North America	Lucas 54521805 12v 37½w	—	—	Lucas 410 12v 40/45w
France	Lucas 54520931 or Lucas 411 12v 37½w	12v 40/45w	—	Lucas 411 12v 40/45w
Austria	Lucas 54521615 12v 37½w	—	—	Lucas 410 12v 40/45w
Italy	—	Lucas 410 12v 40/45w	—	Lucas 410 12v 40/45w
North America	Special 12v		Special 12v	—

Side lamps	Lucas No. 989	12v	6w
Stop/tail lamps	Lucas No. 380	12v	21/6w
Direction indicator lamps	Lucas No. 382	12v	21w
Rear number plate lamp	Lucas No. 989	12v	6w
Instrument panel light and tachometer	Lucas No. 987	12v	2·2w
Warning lights, direction indicator and main beam	Lucas No. 643	12v	2·2w
Warning lights, oil, brake and ignition	Lucas No. 984	12v	3·6w
Interior light, festoon bulb	Lucas No. 272	12v	10w
Clock	Lucas No. 281	12v	2w
Reverse lamps	Lucas No. 382	12v	21w
Rear luggage boot lamp	Lucas No. 209	12v	6w
Selector illumination, automatic transmission, festoon bulb	Lucas No. 256	12v	3w

Suspension

Front	Coil springs, leading top links, transverse bottom links
Rear	de Dion sliding tube, coil springs, with a rear rod for transverse stability

Dimensions

Overall length	14 ft 10½ in. (4,53 m)
Overall width	5 ft 6 in. (1,68 m)
Overall height	4 ft 6¾ in. (1,39 m)
Wheelbase	8 ft 7⅜ in. (2,63 m)
Track, front	4 ft 5⅜ in. (1,35 m)
Track, rear	4 ft 4½ in. (1,33 m)
Ground clearance (under final drive unit)	8½ in. (21,6 cm)
Turning circle	31½ ft. (9,6 m), lock to lock, 3¾ turns of steering wheel
Weight, with water, oil and 5 gallons (22½ litres) of fuel, SC models	2,750 lb. (1.247 kg)
Weight, with water, oil and 5 gallons (22½ litres) of fuel, TC models	2,810 lb. (1.275 kg)
Weight, with water, oil and 5 gallons (22½ litres) of fuel, automatic transmission models	2,775 lb. (1.258 kg)
Roof rack load, maximum approved	112 lb. (50 kg)

Capacities

Component	Imperial unit	U.S. unit	Litres
Engine sump oil, SC and automatic models	8 pints	9.5 pints	4,5
Engine sump oil, TC models	9 pints	10.5 pints	5,0
Extra when refilling after fitting new filter	1 pint	1.2 pints	0,5
Gearbox oil, 4 speed	$1\frac{3}{4}$ pints	2 pints	1,0
Gearbox oil, automatic transmission and oil cooler	12 pints	$14\frac{1}{2}$ pints	7,0
Final drive unit oil	$2\frac{1}{2}$ pints	3 pints	1,4
Fuel tank	12 gallons	14 gallons	55,0
Including a reserve of	$1\frac{1}{4}$ gallons	$1\frac{1}{2}$ gallons	6,0
Cooling system	17 pints	$20\frac{1}{2}$ pints	10,0

Anti-freeze solutions (see chart overleaf)

Cooling system capacity		Anti-freeze required for $33\frac{1}{3}\%$ solution		Anti-freeze required for 50% solution		Anti-freeze required to raise $33\frac{1}{3}\%$ solution to 50%	
Pints	Litres	Pints	Litres	Pints	Litres	Pints	Litres
17	10	$5\frac{2}{3}$	3.0	$8\frac{1}{2}$	5	3	1.7

Recommended lubricants

These recommendations apply to temperate climates where operational temperatures may vary between approximately 10°F (-12°C) and 90°F (32°C).
Lubricants marked with an asterisk (*) are multigrade oils suitable for all temperature ranges.

Information on recommended lubricants for use under extreme winter or tropical conditions can be obtained from The Rover Co. Ltd., Technical Service Department, or your local Distributor or Dealer.

Multigrade oils, produced by the makers of the lubricants listed below, are also approved for the range of S.A.E. grades that they cover.

COMPONENTS	S.A.E.	B.P.	CASTROL	DUCKHAM'S	ESSO	MOBIL	REGENT TEXACO/ CALTEX	SHELL
ENGINE; GEARBOX AND DE DION TUBE	20W	*BP Super Visco-Static 10W-40	*Castrol XL or GTX	Duckham's Q20-50 Motor Oil	Esso Motor Oil 20W/30	Mobiloil Arctic	Havoline 20/20W	*Shell Super Oil 100
AUTOMATIC TRANSMISSION	—	BP Automatic Transmission Fluid Type 'A'	Castrol TQ	Duckham's Nolmatic ATF	Esso Automatic Transmission Fluid	Mobil ATF 200	Texamatic Fluid	Shell Donax T.6
STEERING BOX AND FINAL DRIVE UNIT	90EP	BP Gear Oil SAE 90 EP	Castrol Hypoy	Duckham's Hypoid 90	Esso Gear Oil GP 90/140	Mobilube GX 90	Multigear Lubricant 90	Spirax 90 EP
PROPELLER SHAFT SLIDING SPLINE, FRONT AND REAR HUBS	—	BP Energrease L2	Castrolease LM	Duckham's LB10 Grease	Esso Multi-purpose Grease H	Mobilgrease MP or Mobilgrease Special	Marfak Multi-purpose 2	Retinax A
ANTI-FREEZE SOLUTIONS	—	BP Anti-Frost	Castrol Anti-Freeze	'Standard' Anti-Freeze	Esso Anti-Freeze	Mobil Permazone	PT Anti-Freeze	Shell Anti-Freeze
	—	Super Bluecol or any other anti-freeze solution conforming to British Standards BS 3151 or 3152						
BRAKES AND CLUTCH	Castrol Girling Brake and Clutch Fluid Crimson, Specification S.A.E. 70 R.3							

By Appointment to
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Queen Elizabeth II

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