OWNER'S MAINTENANCE MANUAL

ROVER 3-LITRE MK III

PART No. 4716

ROVER
3 litre

Mark III

Owner's Maintenance Manual

Saloon and Coupé

Incorporating Free Service and Maintenance Schedules

THE ROVER CO. LTD
SOLIHULL
WARWICKSHIRE
ENGLAND

F 922

ROVER MK III 3 LITRE SALOON

Introduction . . . .

This book has been prepared to provide supplementary information to that contained in the Owners Instruction book. Its intention is to give clear and simple information necessary for the efficient care and maintenance of your car.

This book is divided into four sections:

Part 1. Routine maintenance and adjustments.

Part 2. Electrical equipment, body work, etc.

Part 3. General data and index to Parts 1 and 2.

Part 4. Free Service and Maintenance Schedules.

The new car pre-delivery check will have been carried out by the Distributor or Dealer responsible for the sale of the car, leaving a stub in the book to certify that the work has been done.

The routine maintenance of this car has been kept down to a minimum and can, if desired, be carried out by owners without special tools. Any work beyond that detailed in this book should be entrusted to Rover Distributors or Dealers who are equipped and prepared also to carry out the routine maintenance.

It should be noted that the sequence of normal maintenance repeats itself every 20,000 miles (32.000 km).

The Rover Company is always prepared to give advice on maintenance or other matters to individual owners, but any correspondence with the Company *must bear the chassis or car number* which will be found on a plate affixed to the left-hand front door pillar.

PART THREE

GENERAL DATA, SALOON AND COUPÉ MODELS

Engine

Bore	3.063 in. (77,8 mm)
Stroke	4.134 in. (105 mm)
Number of cylinders	Six
Cylinder capacity	183 cu. in. (2.995 cc)
Compression ratio	8.75:1 (8:1 for certain export territories only)
BHP:	
8.75:1 compression ratio	134 at 5,000 rpm
8:1 compression ratio	129 at 4,750 rpm
Maximum torque:	
8.75:1 compression ratio	169 lb/ft (23.37 kg.m)
8:1 compression ratio	161 lb/ft (22.25 kg.m)
Firing order	1, 5, 3, 6, 2, 4
Sparking plugs—8.75:1 compression ratio	Champion N5 } 14 mm with suppressors
Sparking plugs—8:1 compression ratio	Champion N5 } and waterproof covers
Sparking plug point gap	.028 to .033 in. (0,71 to 0,83 mm)
Distributor contact breaker gap	.014 to .016 in. (0,35 to 0,40 mm)
Ignition timing, static—full retard	3° BTDC 8.75:1 and 8:1 compression ratio

Tappet clearance—inlet	.006 in. (0,15 mm) hot
Tappet clearance—exhaust	.010 in. (0,25 mm) hot or cold
Valve timing (No. 1 exhaust valve peak)	106° BTDC
Oil pressure	55 to 65 lb sq in. (3,8 to 4,6 kg/cm²) at 30 mph (50 kph) in. top gear with engine warm
Lubrication	Full pressure
Oil filter—internal	Gauze pump intake filter in sump
Oil filter—external	Full-flow

Clutch, 4-speed gearbox

Type	Single dry plate, 10 in. diameter. Hydraulic operation
Adjustment	¾ in. (20 mm) free movement at pedal pad
Fluid	Castrol Girling Brake and Clutch Fluid Crimson. Specification SAE 70 R3.

Gearbox, 4-speed

Single helical constant mesh with synchromesh on top, third and second speeds. Laycock De-Normanville automatic overdrive 1.286:1 ratio with Rover control

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.

Propeller shafts

Type	Open type with centre bearing and support

Rear axle

Type	Spiral bevel with semi-floating shafts	
	4-speed box with overdrive	Automatic transmission
Ratio	4.3:1	3.54:1

Gear ratios

Overdrive	.778:1
Top	1.0:1
3rd	1.274:1
2nd	1.887:1
1st	3.376:1
Reverse	2.968:1
High (top)	1.0:1
Intermediate (2nd)	1.45:1
Low (1st)	2.39:1
Reverse	2.09:1

Fuel system

Fuel pump	Dual SU high pressure. Electric, located in luggage boot behind rear trim panel
Carburetter	SU HD 8. Single horizontal, dustproof
Air cleaner	Paper element type

Cooling system

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

Electric system

Type	Negative earth
Voltage	12 volt } Battery located in luggage boot under metal
Battery capacity	57 AH } cover at right-hand rear
Ignition system	Coil
Charging circuit	Current-voltage regulator

Replacement headlamp units and bulbs

Headlamp units sealed beam:	
RHD	Lucas Sealed Beam 12 v 60/45 w
LHD Except North America and Europe	Lucas No. 417 12 v 60/40 w
LHD Europe except France	Lucas No. 410 12 v 45/40 w Duplo
LHD France	Lucas No. 411 12 v 45/40 w Duplo (yellow)
North America	Sealed unit
Side lamps	Lucas No. 989 12 v 6 w
Stop-tail lamps	Lucas No. 380 12 v 21/6 w
Direction indicator lamps	Lucas No. 382 12 v 21 w
Rear number plate lamp	Lucas No. 989 12 v 6 w

Cigar lighter illumination	Tex No. GBP-V-2.2 12 v 2.2 w
Speedometer and grouped instruments, tachometer on Coupé	Lucas No. 984 12 v 3.6 w
Nacelle illumination, Coupé	Lucas No. 987 12 v 2.2 w
Instrument panel lights	Lucas No. 987 12 v 2.2 w
Warning lights	Lucas No. 987 12 v 2.2 w
Interior lights, festoon bulb	Lucas No. 254 12 v 6 w
Automatic transmission selector indicator lamp	Lucas No. 280 12 v 1.5 w
Panel plate	Carr Fastener No. 82/036 12 v 1.2 w
Clock	Lucas No. 281 12 v 2 w
Reverse lamp	Lucas No. 382 12 v 21 w
Rear luggage boot lamp	Lucas No. 222 12 v 4 w
Handbrake warning light	Lucas No. 281 12 v 2 w
Bonnet lights, Coupé models	Tex SP No. 209 12 v 6 w

Suspension

Front	Laminated torsion bar
Rear	Progressive rate semi-elliptic leaf

Hydraulic dampers Telescopic, anti-aeration, non-adjustable

Brakes

Foot brake	Hydraulic servo assisted, disc brakes at front, drum brakes at rear
Hand brake	Mechanical linkage to rear wheels
Fluid	Castrol Girling Brake and Clutch Fluid Crimson. Specification SAE 70 R3.

Steering

Type			Power assisted
Ratio: straight ahead			15.6:1
full lock			10.2:1
Front wheel alignment			$\frac{1}{16}$ in. (1,5 mm) toe-in to $\frac{1}{16}$ in. (1,5 mm) toe-out
Camber angle	$1\frac{1}{2}°$	Cars with Standard suspension	Static unladen position
Castor angle	$\frac{1}{4}°$ positive		
Swivel pin inclination	$4\frac{1}{2}°$		
Camber angle	2°	Cars with High suspension marked H on serial number plate	
Castor angle	1° negative		
Swivel pin inclination	4°		

Tyres

Size .. .. Avon Turbospeed or Dunlop Roadspeed 6.70 in. x 15 in.

Pressures:

	Front	Rear
Speeds up to 105 mph (168 kph) and normal loads—		
lb/sq in.	26	26
kg/cm²	1,8	1,8
Speeds over 105 mph (168 kph) and normal loads—		
lbs/sq in.	30	30
kg/cm²	2,1	2,1

When the car is driven fully laden, the rear tyre pressures should be increased by 4 lb/sq in. (0,3 kg/cm²).

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

Recommended lubricants

These recommendations apply to temperate climates where operational temperatures may vary between approximately 10°F (–12°C) and 90°F (32°C).

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

Lubricants marked with an asterisk (*) are multigrade oils suitable for all temperature ranges.

COMPONENTS	SAE	BP	CASTROL	DUCKHAM'S	ESSO	MOBIL	REGENT TEXACO-CALTEX	SHELL
Engine and air cleaner	20W	BP Energol SAE 20W	*Castrol XL	*Duckham's Q20-50 Motor Oil	Esso Motor Oil 20W/30	Mobiloil Arctic	Havoline 20/20W	*Shell Super Motor Oil
Gearbox only	90 EP	BP Gear Oil SAE 90 EP	Castrol Hypoy	Duckham's Hypoid 90	Esso Gear Oil GP 90/140	Mobilube GX 90	Multigear Lubricant EP90	Spirax 90 EP
Overdrive only	20W	BP Energol SAE 20W	*Castrol XL	*Duckham's Q20-50 Motor Oil	Esso Motor Oil 20W/30	Mobiloil Arctic	Havoline 20/20W	*Shell Super Motor Oil
Automatic Transmission and Power Steering	—	BP Automatic Transmission Fluid Type A	Castrol Automatic Transmission Fluid	Duckham's Nolmatic ATF Type	Esso Automatic Transmission Fluid	Mobil Fluid 200	Texamatic Fluid	Shell Donax T6
Rear axle	90 EP	BP Energol SAE 90 EP	Castrol Hypoy	Duckham's Hypoid 90	Esso Gear Oil GP 90/140	Mobilube GX 90	Multigear Lubricant EP90	Spirax 90 EP
Front hubs, propeller shaft, rear spring and front torsion bar sleeves	—	BP Energrease L2	Castrolease LM	Duckham's LB 10 grease	Esso Multi-purpose grease H	Mobilgrease MP or Mobil-grease Special	Marfak All-purpose	Retinax A
Brakes	Castrol Girling Brake and Clutch Fluid Crimson. Specification SAE 70 R3							
Anti-freeze solution	Any good quality glycol-base anti-freeze solution							

Capacities

Component	Imperial unit	US unit	Litres
Engine sump oil	10 pints	12 pints	5,5
Extra when refilling after fitting new filter	1 pint	1.2 pints	0,5
Gearbox oil (4-speed models)	3 pints	3½ pints	1,75
Overdrive oil (4-speed models)	1½ pints	2 pints	0,85
Gearbox oil, automatic transmission, with oil cooler	14 pints	17 pints	8,0
Rear axle oil	3 pints	3½ pints	1,75
Power steering unit	3 to 3½ pints	3½ to 4 pints	1,75 to 1,8
Fuel tank	14 gallons	17 gallons	63,5
Including a reserve of	1½ gallons	2 gallons	7
Cooling system	26 pints	29 pints	14,7

Dimensions, all models

Overall length	15 ft. 6½ in. (4,74m)
Overall width	5 ft. 10 in. (1,78 m)
Overall height, Saloon models	Standard suspension 5 ft. 1 in. (1,55 m) High suspension* 5 ft. 1½ in. (1,56 m)
Overall height, Coupé models	Standard suspension 4 ft. 10 in. (1,46 m) High suspension* 4 ft. 10½ in. (1,47 m)
Wheelbase	9 ft. 2½ in. (2,80 m)
Track, front	4 ft. 7 5/16 in. (1,39 m)
Track, rear	4 ft. 8 in. (1,41 m)
Ground clearance (under silencer)	6⅝ in. (167 mm)
Turning circle between kerbs	40 ft (12,2 m), lock to lock 2½ turns

* Identified by letter 'H' on car number plate affixed to left-hand front door pillar.

Weight, with water, oil and 5 gallons (22½ litres) of fuel

Saloon, 4-speed models	3,738 lb (1.705 kg)
Saloon, automatic transmission model	3,700 lb (1.678 kg)
Coupé, 4-speed models	3,738 lb (1.705 kg)
Coupé, automatic transmission models	3,700 lb (1.678 kg)

By Appointment to
Her Majesty
Queen Elizabeth II

Manufacturers
of Motor Cars and
Land-Rovers

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