ROVER
3 Litre
Mark II

OWNER'S
INSTRUCTION
MANUAL

SALOON AND COUPE

Part No. 4520
## CONTENTS

<table>
<thead>
<tr>
<th>Part</th>
<th>Introduction</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART ONE—OPERATING INSTRUCTIONS</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Body fittings</td>
<td></td>
<td>39</td>
</tr>
<tr>
<td>Borg-Warner Automatic Transmission</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>Frost precautions</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Fuel filler</td>
<td></td>
<td>23</td>
</tr>
<tr>
<td>Hand brake</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>Instruments and controls</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Overdrive unit</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Power steering</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>Radiator filler</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Recommended lubricants</td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>Starting procedure</td>
<td></td>
<td>36</td>
</tr>
</tbody>
</table>

### PART TWO—ROUTINE MAINTENANCE AND ADJUSTMENTS

<table>
<thead>
<tr>
<th>Adjustment</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borg-Warner Automatic Transmission</td>
<td>60</td>
</tr>
<tr>
<td>Brakes</td>
<td>66</td>
</tr>
<tr>
<td>Circuit diagram</td>
<td>82</td>
</tr>
<tr>
<td>Clutch</td>
<td>69</td>
</tr>
<tr>
<td>Electrical</td>
<td>74</td>
</tr>
<tr>
<td>Engine</td>
<td>49</td>
</tr>
<tr>
<td>Fuel system</td>
<td>71</td>
</tr>
<tr>
<td>Gearbox, 4-speed and Overdrive</td>
<td>59</td>
</tr>
<tr>
<td>Maintenance and lubrication</td>
<td>47</td>
</tr>
<tr>
<td>Propeller shaft</td>
<td>73</td>
</tr>
<tr>
<td>Rear axle</td>
<td>62</td>
</tr>
<tr>
<td>Recommended lubricants</td>
<td>48</td>
</tr>
<tr>
<td>Steering and front suspension</td>
<td>63</td>
</tr>
<tr>
<td>Wheels and tyres</td>
<td>72</td>
</tr>
</tbody>
</table>

### PART THREE

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>General data</td>
<td>84</td>
</tr>
<tr>
<td>Index</td>
<td>90</td>
</tr>
</tbody>
</table>
Instruments and controls

Layout of controls and instruments—Saloon models
4-speed
gearbox with Overdrive—Late models illustrated

1. Outer glove box lid*
2. Heater control
3. Inner glove box lid
4. Clock
5. Demister control
6. Windscreen wiper switch
7. Push button, windscreen washer
8. Windscreen wiper speed control
9. Panel light switch
10. Speedometer*
11. Direction indicator arrows
12. Main beam warning light
13. Oil pressure warning light
14. Ignition warning light
15. Oil level and main reserve pump switch
16. Cool start control warning light
17. Water temperature indicator*
18. Fuel and oil level indicator*
19. Ammeter*
20. Main light and parking switch
21. Two-speed heater fan control
22. Ignition and starter switch
23. Cool air control R.H. upper
24. Tool tray*
25. Cigar lighter
26. Gear change lever
27. Ashtray* Alternate positions shown in dotted line
28. Headlamp dipper switch plate
29. Overdrive control switch*
30. Cold start control
31. Clutch pedal*
32. Horn ring*
33. Foot brake pedal*
34. Accelerator pedal*
35. Headlamp switch
36. Bonnet lock control
37. Direction indicator and headlamp flasher switch
38. Hand brake lever*
39. Cool air control knob R.H. lower
40. Warning light, hand brake and brake fluid reservoir*
41. Cool air control R.H. upper
42. Tool tray*
43. Cigar lighter
44. Gear change selector*
45. Second gear hold switch*
46. Gear change quadrant*
47. Headlamp dipper switch*
48. Cold start control*
49. Horn ring*
50. Foot brake pedal*
51. Kickdown switch*
52. Accelerator pedal*
53. Headlamp switch
54. Bonnet lock control
55. Direction indicator and headlamp flasher switch
56. Hand brake lever*
57. Cool air control knob R.H. lower
58. Warning light, hand brake and brake fluid reservoir*

The instrument panel complete and the items marked * are transferred to the opposite side on left-hand drive cars.
Under normal running conditions the needle should be in the white band marked N. The needle may drop to the low mark when the engine is running at idling speed, but provided it returns to the N position immediately the engine is speeded up, the oil pressure can be considered satisfactory.

Should the needle drop to the low band and also the warning light appear at any time when the engine is running above idling speed, stop the engine immediately and investigate the cause; the most likely is that of low oil level in the sump. Should on the other hand the needle rise appreciably above the white band marked N, indicating an excessively high oil pressure, the reason should be investigated at the earliest possible opportunity, otherwise serious damage to the engine may result. High oil pressure is most likely due to a sticking oil pressure release valve.

**Cold start control warning light (16)**

The appearance of the amber warning light, which is the right-hand lower of the group, will indicate that the control has been left out inadvertently and must be pushed in at once.

Like all mechanical devices, the mixture control warning system is not completely fool-proof and the responsibility for pushing in the cold start control rests with the driver. Suspected bulb failure may be confirmed by pulling out the cold start control momentarily when the engine is hot, when the bulb should be illuminated.

Should a warning light bulb burn out it should be replaced at the earliest opportunity.

**Cold start control (33, 33)**

Marked ‘Cold Start’ and mounted under the parcel shelf below the steering column.

It provides a normal mixture when pushed right in, then as the control is pulled out, the engine idling speed is gradually increased; in addition, during the second part of the control movement, the mixture is progressively strengthened until, with the knob right out, a very rich mixture is obtained for starting from cold. By turning the knob slightly, the control can be locked in any position.

When the engine has started, the control must be returned to the normal position as soon as possible, consistent with even running.

See starting procedure for full details.

**Ammeter (19, 29)**

On Saloon models the ammeter is incorporated in the multiple gauge; a separate unit is fitted at the lower edge of the instrument panel on Coupé models. The ammeter indicates the charging or discharging rate of the battery.

An automatic control regulates the charging rate.

When starting from cold, the charge rate will rise to a steady maximum, remain constant for a short while and then fall as the battery again becomes fully charged.
Direction indicator arrows (11)

The green direction indicator arrows at the bottom of the speedometer, flash either R.H. or L.H., depending on the direction of turn, in sympathy with the indicator bulbs. The flasher unit, mounted behind the instrument panel, is audible in operation.

Should either a front or rear indicator bulb fail, the remaining indicator will continue to flash, and both indicator arrows will flash rapidly; the flasher unit will not be heard.

Direction indicator and headlamp flasher switch (41) (22)

Is the upper lever on the right-hand side of the steering column. To indicate a turn to the right press the control downwards; for a left turn, upwards.

The direction indicator control is self-cancelling; on a slight bend the control may not return, in which case it must be cancelled by hand.

To flash the headlamps lift the switch slightly upwards towards the steering wheel. The headlamps can be flashed at any time, providing they are not switched on to main beam.

Clock (4) (4)

The clock is mounted in the centre of the facia rail. To adjust the hands push in the knob in the centre of the instrument and turn in the required direction.

The clock is of the mechanical type and electrically wound. Every 2 to 2½ minutes the magnetic armature mechanism extends the spring, which in turn drives the clockwork. The extending of the spring is audible and is indicated by a click.

Interior lights

Each interior light is switched on automatically when the appropriate door is opened and extinguished when the door is closed. When any of the rear doors are opened, both lights are automatically switched on and are extinguished when the door is closed.

The lights can be controlled manually by means of a small switch on top of light.

Fog lamp (optional equipment)

When fog lamps are fitted they are normally controlled as follows:

Saloon models. Toggle switches under the instrument panel.

Coupé models. Toggle switches on the underside between each pair of nacelle instruments.

Alternative positions for all Saloon models except Borg-Warner are detailed below:

On 4-speed Saloon models, two switches on the steering column cover; on 4-speed models with overdrive, one switch on steering column and one toggle switch under instrument panel.

Fog lamps can only be used when the main switch is on.
identified by the blue label affixed to the right-hand side of the
windscreen and a blue label tied to the engine.

The use on the roads during frosty weather of salt sometimes
in quite strong concentrations, is now being widely practised.
Whilst special protection has been provided for the under surfaces
of the body etc., due to its highly corrosive nature salt deposited
should be washed off as soon as possible by thorough under
washing of the car.

Hand brake (42) (45)
This protrudes below the instrument panel. To release the
brake, pull slightly, depress the release lever in the handle and
push down as far as possible; to apply the brakes, pull the handle.

Warning light, hand brake
and brake level fluid (44) (46)
The main and important pur-
pose of the amber warning light
marked BRAKE is to warn you that
the fluid level in the brake reservoir
is too low. Should, therefore, the
light come on at any time when the
hand brake is off, immediately
investigate the cause. In any case
the level in the brake reservoir
tank must be checked and replenished as necessary. It also
gives, when the ignition is on, visual indication that the hand
brake is applied. Before starting to drive off ensure that the
light is extinguished by releasing the hand brake.

Gear change lever, 4-speed
gearbox (26) (25)
The gears are selected by means
of a remote control mechanism and
the lever mounted centrally on the
gearbox cover.

Gear changing instructions
Gear changing is carried out in the normal manner. Synchron-
emesh gears are provided for changing from first to second, second
to third, third to top, top to third and third to second and in these
cases single de-clutching may be used; for changing from second
to first, it is advisable to use the double de-clutch method.

To engage reverse gear it is necessary to press down the
plunger on top of the gear change lever.

Overdrive unit, 4-speed gearbox
The overdrive unit, attached to the rear of the gearbox,
provides an extra high gear only when the gear lever is in ‘top
gear’ and lowers the overall gear ratio from 4.31 to 3.35-1. This
reduces engine speed by 22.3% in relation to road speed,
thus permitting high road speeds with low engine revolutions
resulting in fuel economy and reduced engine wear.

Should third gear be required whilst the overdrive is engaged
all that is necessary is to select third in the normal manner,
when overdrive is automatically disengaged. Engine revolutions
should be kept fairly high, depending on road speed, during
this change, to minimise stress on the transmission.

On re-engaging top gear, overdrive will automatically be
selected, providing the control switch on the steering column
has not been moved and the accelerator pedal is slightly depressed.

Do not attempt to engage normal drive at speeds over 100
m.p.h. (160 k.p.h.).