SECTION O

THE WHEELS, TYRES, AND JACKING

0 THE WHEELS, TYRES, AND JACKING

GENERAL

The spare wheel is housed in the luggage compartment and clamped in position beneath the cover.

Remember that the spare wheel tyre pressure should be maintained at the correct running pressure for the rear wheels.

Pressures are given in **'GENERAL DATA'.**

The jack and tyre pump are contained in the tool roll strapped above the spare wheel in the luggage compartment.

Disc wheels are fitted as standard and wire wheels are available as optional equipment.

TYRE MAINTENANCE

Even tyre wear is promoted by changing the positions of the tyres on the car at intervals of about 3,000 miles (4800 km.). The spare tyre should take its turn with the others (see Fig. O.8).

Attention should be paid to the following points, with a view to obtaining the maximum mileage from the tyre equipment of the vehicle.

Test the pressures of the tyres every 500 miles (800 km.) by means of a suitable gauge, and restore any air lost. It is not sufficient to make a visual examination of the tyre for correct inflation. Inflate the spare wheel to the correct rear wheel pressure.

Keep the treads free from grit and stones and carry out any necessary repairs. Clean the wheel rims and keep them free from rust. Paint the wheels if required.

Keep the brakes and clutch adjusted correctly and in good order. Fierceness or uneven action in either of these units has a destructive effect on the tyres.

Misalignment is a very costly error. Suspect it if rapid wear of the front tyres is noticed, and correct the fault at once. See Section J.10 for details of front wheel alignment.

Should the tyres get oily, petrol (gasoline) should be applied sparingly and wiped off at once.

Avoid under- and over-inflation.

Avoid kerbing and other causes of severe impact.

Have damage repaired immediately.

Remove tyres in time for remoulding.

Section O.1

JACKING UP THE CAR

When jacking a front wheel the jack pad should be engaged in the depression in the lower suspension arm spring seating.

At the rear the jack should be placed below the rear spring centre plate or under the spring as close to the axle as possible.

Always apply the hand brake and place blocks each side of the wheels remaining on the ground when the front or rear of the car is to be raised.

The car must not be jacked under the frame side-members.

Section O.2

REMOVING AND REPLACING ROAD WHEELS

Disc wheels

Remove the hub cover by inserting the flattened end of the wheel nut spanner in the recess provided adjacent to the retaining studs and giving it a sideways twist.

Remove the four nuts securing the road wheels to the hub. The wheel nuts have right-hand threads, i.e. turn clockwise to tighten and anti-clockwise to remove. Lift the road wheel from the studs.

Reverse this procedure when replacing the road wheel. Ensure that the brake adjustment hole seal is in position. Line up one of the holes in the wheel with that in the drum to enable the brakes to be adjusted without removing the wheel. Tighten the nuts to a torque wrench reading of 60 to 62·5 lb. ft. (8·3 to 8·65 kg. m.). **Do not overtighten.**

To refit the hub disc, the rim should be placed over two of the buttons on the wheel centre and the outer face given a sharp blow of the fist over the third button.

Wire wheels

Use the copper mallet provided in the tool kit to slacken the winged hub nut securing the wheel on the splines. The hub nuts on the left-hand side of the car have right-hand threads (unscrew anti-clockwise) and the nuts on the right-hand side of the car have left-hand threads (unscrew clockwise).

When replacing a wheel, ensure that the brake adjustment hole seals in the brake-drum are in position.

Section O.3

VALVES

Valve caps, in addition to preventing dirt from entering the valve, form a secondary air seal and should always be fitted. The valves may be tested for airtightness by rotating the wheel until the valve is at the top and inserting its end in an eggcup full of water. If bubbles appear the seating is faulty and should be removed and a new one fitted. It is advisable to change the valve interiors every 12 months.

Section O.4

TYRE REMOVAL

Remove all valve parts to deflate the tyre completely, and push both edges into the base of the rim at a point

diametrically opposite the valve. Lever the cover edge, near the valve, over the rim of the wheel, using two levers at intervals of 6 in. (15 cm.) apart.

NOTE.—Do not attempt to stretch the edges of the tyre cover over the rim edge.

Force is entirely unnecessary and is detrimental, as it tends to damage the wired edges. Fitting or removing is quite easy if the tyre edges are carefully adjusted into the rim base; if found difficult, the operation is not being performed correctly.

Remove the tube carefully; do not pull on the valve. Stand the tyre and wheel upright, keeping the bead on the base of the rim. Lever the bead over the rim flange and at the same time push the wheel away from the cover with the other hand.

Section O.5

THE IMPORTANCE OF BALANCE

In order to obtain good steering it is of importance to ensure that the wheels, with tyres fitted, are in good balance. To assist this, the tyre manufacturers are now marking their tyres with a white spot in the neighbourhood of the bead at the lightest point of the cover; similarly, they are marking the inner tubes with spots to indicate their heaviest point. When tyres are assembled care must therefore be taken to see that they are assembled with the spots on the cover coinciding with the spots on the tube.

It must be noted, in addition, that special balancing discs are fitted to the inside of the cover casing in some cases and that these should on no account be removed as the tyre balance will be upset if this is done. These balance discs are not repair patches and do not indicate any fault in the tyre.

Special balance weights, which cover a range of weights weighing from ½ to 3½ oz. in steps of ½ oz., are supplied by the Dunlop Rubber Co. for attachment to the wheel rim under Part Nos. WBW/1 to 7.

Their use is advised to maintain the correct balance for the wheels, which must be within 8 to 12 in. oz. (·56 to ·85 cm. kg.).

The balance weights are fitted to the outside rim of the wheel.

Section O.6

FITTING TYRES AND TUBES

Inspect the inside of the cover carefully and remove all dirt. The wheel rim must be clean, free from rust and undamaged.

Dust the inside of the cover with french chalk. Inflate the tube until it begins to round out, then insert it in the cover.

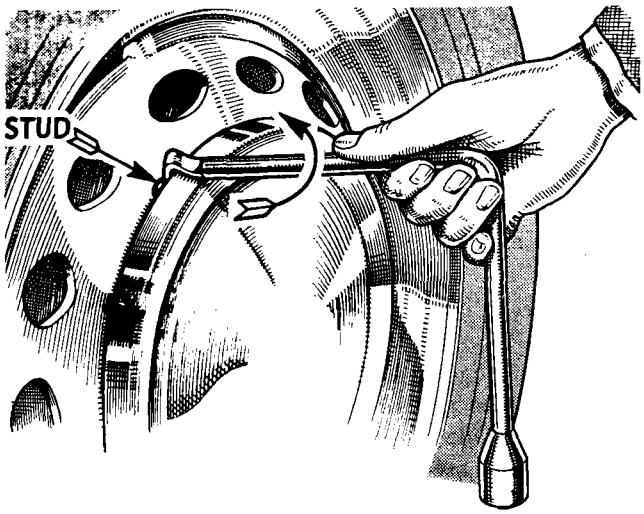

Fig. O.1
Removing a hub cover

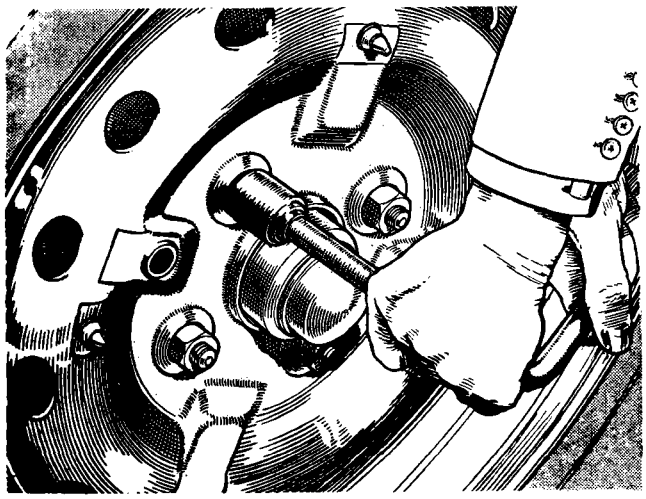

Fig. O.2
Removing a disc wheel

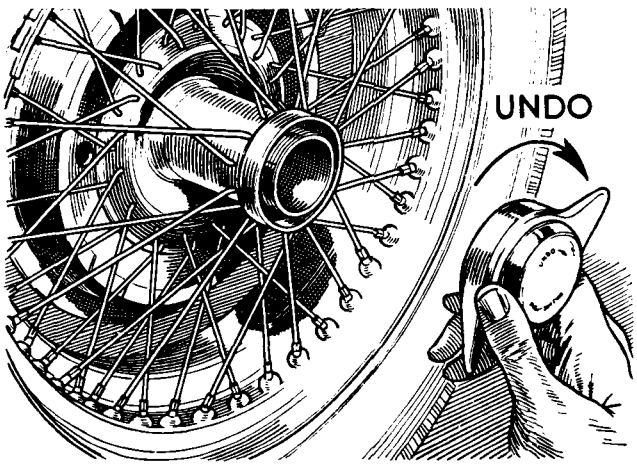

Fig. O.3
Removing a wire wheel

Apply a frothy solution of soap and water generously around the centre base of the **tube,** extending upwards between the tyre beads and the tube itself for at least 2 in. (50·8 mm.) on both sides. Also apply the solution to the bottom and outside of the tyre beads. Do not allow the solution to run into the crown of the tyre. The solution must be strong enough to feel slippery when the fingers are wetted with the solution and rubbed together.

Mount the tyre on the rim immediately, whilst the soap solution is still wet.

Push one edge of the cover over the edge of the rim. It will go quite easily if the part first put on is fitted on the opposite side of the valve and is pushed right down into the rim base. Move it round so that its balance spots coincide with those of the inner tube when it is inserted with the valve passing through the hole in the rim. (Take care that the valve, fitted in the side of the tube, is on the correct side of the rim.)

Before inflating, be sure that the tyre beads are clear of the well of the rim all the way round and **push the valve into the tyre as far as possible in order to ensure the tube is not trapped between the bead and the rim, then pull it out again into its correct position.**

Inflate slowly until the beads are fully seated.

Remove the valve core to **deflate the tube completely.**

Reinflate to the correct working pressure (see page 9 in **'GENERAL DATA'**). This procedure must be followed whenever a tube is fitted.

The object of the double inflation is to permit any stretched portions of the tube to readjust themselves in the cover and relieve any local strains in the tube.

In an emergency french chalk may be used as a substitute for the soap solution, provided it is evenly and generously applied. This practice, however, is not recommended.

Repairing tubes

Punctures or injuries must be vulcanized. Ordinary patches should only be used for emergencies and cannot be relied upon.

Section O.7

MAINTENANCE OF WIRE WHEELS

In wheel building the rim, hub shell, spokes, and nipples should be loosely assembled to bring the rim into as true a running position with the hub as practicable, while ensuring that the outside dish is maintained. (Outside dish is the distance from the edge of the rear rim flange to the flange of the hub shell.)

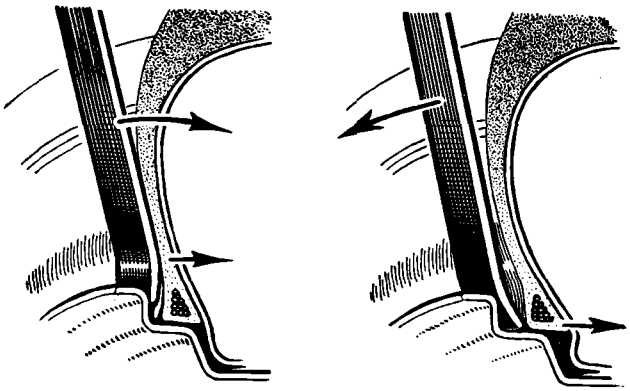

Fig. O.4
The use of tyre levers

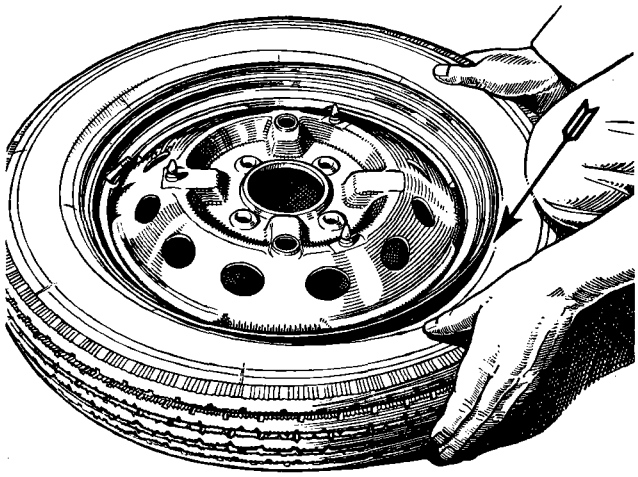

Fig. O.5
Pushing the tyre bead into the well

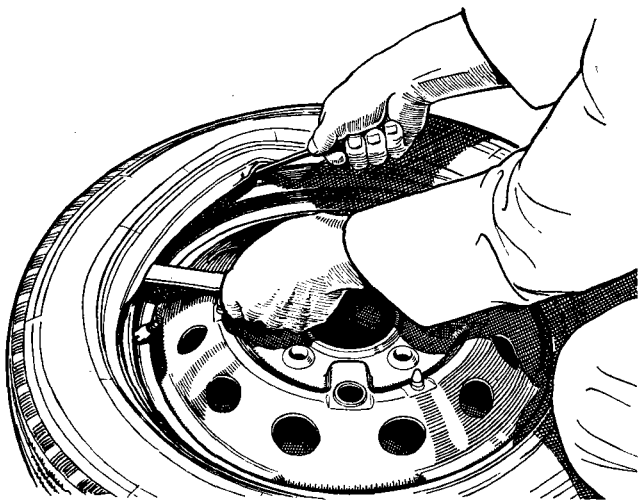

Fig. O.6
Lifting the bead over the rim

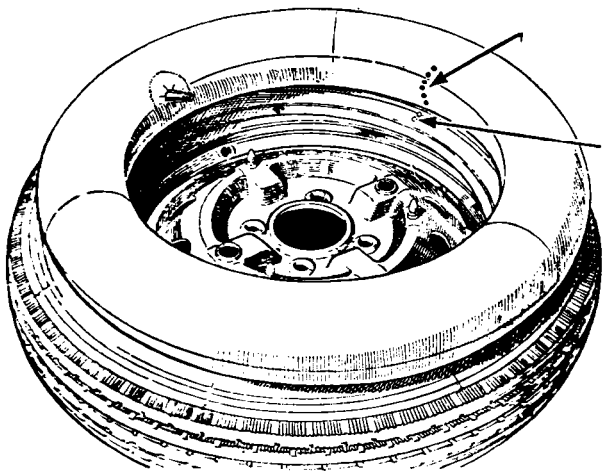

Fig. O.7
Balance marks on tyre and tube

When this condition is reached, and not before, the wheel should be mounted on a running hub. Each pair of spokes should then be tensioned carefully a small amount at a time, working from one pair of spokes and thence to the diametrically opposite pair of spokes, afterwards repeating the process on the opposed pairs, which are located at right-angles to the original pair of spokes tensioned, and so on.

At each stage of the tensioning the truth of the wheel should be checked carefully both for lateral and up-and-down movement, checking any tendency to out of truth by giving a slight additional tension to the appropriate spoke or sets of spokes.

It is important that as little additional tension as possible should be given when pulling the rim true in this manner, the desirable condition to aim at being that all spokes are as nearly as possible at the same tension. If excessive tension is required to bring the rim true the opposing spokes must be loosened slightly.

The experienced wheel builder will generally be able to gauge when the correct tension has been reached, either by the general feel of the spokes or by the ringing note which the spoke will give if lightly struck with a small spanner or similar metal object.

When building is completed the wheel should be examined carefully to ensure that no spoke ends protrude into the rim well. Any that do so should have their protruding ends carefully filed away.

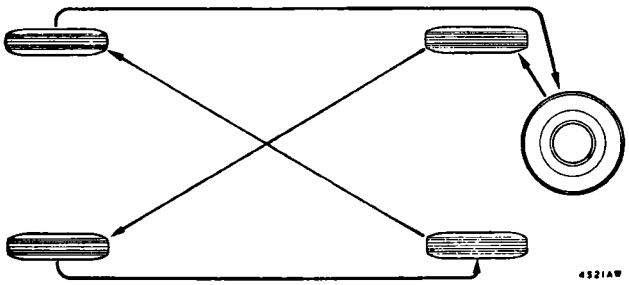

Fig. O.8
System of wheel changing to regularize tyre wear

SECTION OO

THE WHEELS, TYRES, AND JACKING

(MGA 1600 and MGA 1600 [Mk. II])

00 THE WHEELS, TYRES AND JACKING

Section OO.1

HIGH-SPEED TYRE PRESSURE CONDITIONS

The new British motorways and current facilities for Continental touring give the motorist many opportunities of driving at high and sustained high speeds. In such conditions, and in competition work, the tyres are subjected to greater stresses than those produced during ordinary driving.

Many factors, some probably as important as the physical characteristics of the tyre itself, affect the speed at which it should be driven: road surface, air temperature, and in particular the duration of high-speed driving. However, a normal tyre in good condition and at the correct pressure can be relied upon to perform satisfactorily at speeds up to 80 m.p.h. (144 km./hr.) and intermittently in excess of this by 10 m.p.h. (18 km./hr.). If the car is to be driven consistently at speeds near the maximum of which it is capable special tyres should be fitted on the advice of the tyre manufacturers.

For the 'MGA 1600' fitted with 5·60—15 Gold Seal standard tyres we give the following recommendations:

(1) Normal motoring—standard tyre pressures as given in **'GENERAL DATA'** may be used.
(2) Fast motoring—pressures should be increased by 4 lb./sq. in. (·281 kg./cm.²).
(3) Sustained high speeds and competition work—pressures should be increased by 6 lb./sq. in. (·422 kg./cm.²).

These remarks do not apply to remoulded tyres since it is even more difficult to state with certainty what their maximum speed should be. Therefore when it is intended to indulge in high speeds or competition work we advise the use of first tread tyres.

Section OO.2

GOLD SEAL NYLON AND ROAD SPEED TYRES

Gold Seal nylon tyres for Home and Export (except West Germany) were introduced at Chassis No. 103192. Gold Seal (White Wall) and Road Speed (White Wall) tyres are available as optional extras. Standard Road Speed nylon tyres are fitted to cars exported to West Germany.

The tyre pressure recommendations for these tyres are as follows.

Dunlop Gold Seal nylon tyres

For all normal use, including motorways, etc., up to 100 m.p.h. (161 km.p.h.):

Front	.. ..	21 lb./sq. in. (1·47 kg./cm.²)
Rear	.. ..	24 lb./sq. in. (1·68 kg./cm.²)

Where maximum or near-maximum performance is required:

Front	.. ..	24 lb./sq. in. (1·68 kg./cm.²)
Rear	.. ..	27 lb./sq. in. (1·9 kg./cm.²)

Dunlop Road Speed RS.5 tyres

When the car is fitted with Dunlop Road Speed RS.5 tyres as an optional extra (recommended when the car is used predominantly at very high speeds):

Normal use:

Front	..	17 lb./sq. in. (1·1 kg./cm.²)
Rear	.. ..	20 lb./sq. in. (1·4 kg./cm.²)

When maximum or near-maximum speeds are sustained for lengthy periods or for competition use:

Front	..	24 lb./sq. in. (1·68 kg./cm.²)
Rear	.. ..	27 lb./sq. in. (1·9 kg./cm.²)