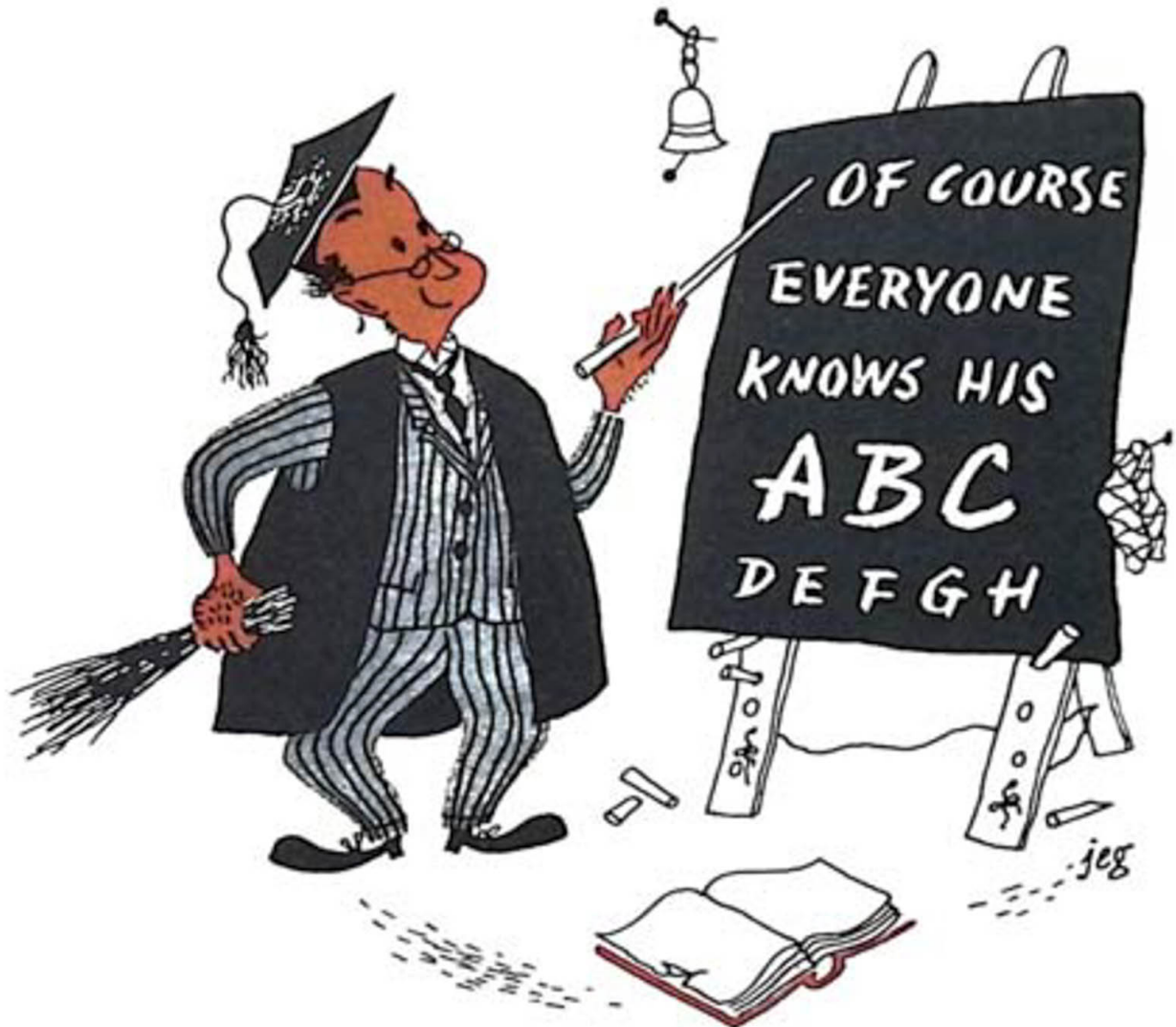
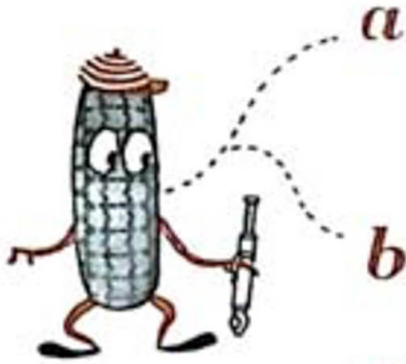


**HOW TO KEEP
YOUR
MOTOR-CYCLE TYRES
FIT**



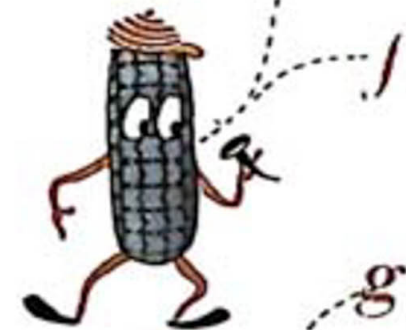




a Maintain correct inflation pressures. Buy a pressure gauge and use it frequently.



b When a pillion passenger or additional load is carried, increase the rear tyre pressure appropriately. A load and pressure table is on page 2.



c Maintain the machine and sidecar in correct alignment. A method of testing is shown on pages 5 and 6.



d Avoid unnecessarily rapid acceleration and fierce braking. They wear out tyres rapidly.



e Drive at a reasonable speed, having regard to the road conditions, and do not "blind" over bad roads. The amount of concussion which the tyres can stand is limited.



f Regularly remove flints, nails etc., from the tread, or they will work through, puncture the tube and destroy the casing.



g Keep the tyres and spokes free from oil, grease and paraffin. Remove oil and grease with a cloth and a little petrol.

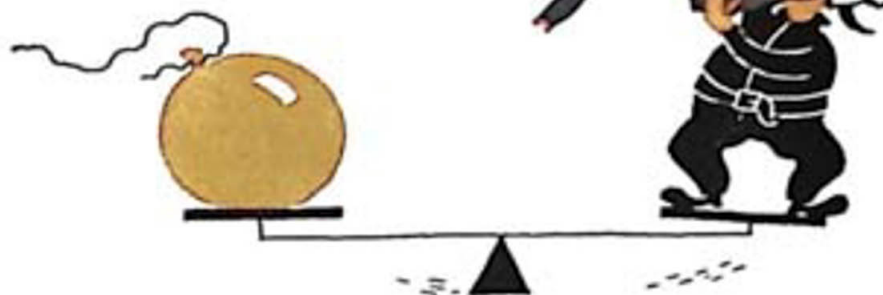


h If a studded front tyre develops irregular or "stepped" wear, interchange front and rear tyres if of the same size and type. Alternatively, reverse the direction of rotation to correct irregular wear, and restore maximum resistance to slip.

Many experienced motor-cyclists prefer the Dunlop "Ribbed" tyre which is designed for front wheels. This tyre is less liable to irregular wear, it gives low rolling resistance and provides light, easy steering. The circumferential ribs prevent front wheel side slip, particularly in fast cornering.



BALANCE INFLATION WITH LOAD



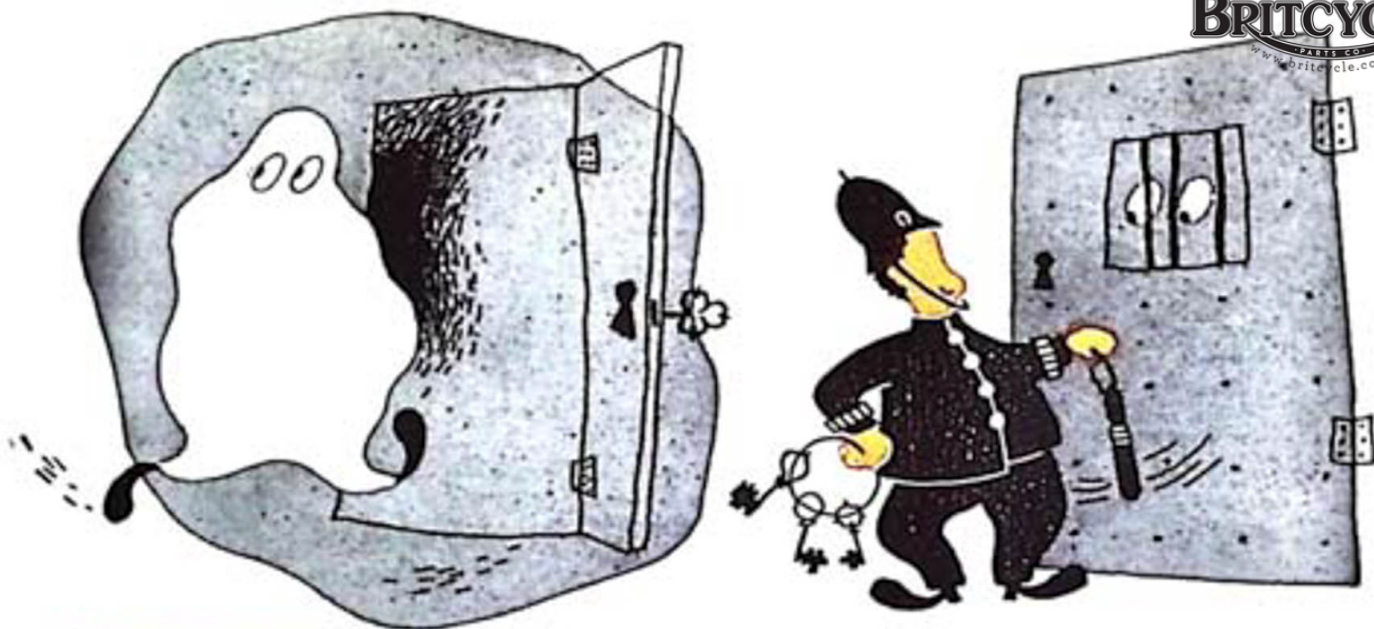
The inflation pressures given below are those recommended for a given load for each size of tyre. The load upon each tyre can be found by placing each wheel in turn on a weighbridge, the weights being taken with the rider seated on the machine. Due allowance should be made for a pillion rider, and in the case of side-car combinations, for passengers.

Nominal Tyre Section (Inches)	Inflation Pressures—lb. per sq. in.					
	16	18	20	24	28	32
	Load per tyre—lb.					
2.25–21 } Autocycle/	80	100	120	145	170	200
2.25–19	80	100	120	145	170	200
2.375	120	140	160	185	210	240
2.50	120	140	160	185	210	240
2.75	140	160	180	210	250	280
3.00	160	180	200	240	300	350
3.25*	200	240	280	350	400	440
3.50*	280	320	350	400	450	500
4.00*	360	400	430	500	—	—

*For Motor Scooter tyres, see table below.

MOTOR SCOOTER TYRES

Tyre Size	Inflation Pressures—lb. per sq. in.						
	16	18	20	24	28	32	36
	Load per tyre—lb.						
3.25–12	160	180	210	240	290	330	380
3.50–7	160	180	210	240	290	330	380
3.50–8	200	220	240	280	320	360	400
3.50–10	220	240	260	310	350	390	440
3.50–12	240	270	290	340	380	440	480
4.00–8	240	270	290	340	380	440	480
4.00–12	300	320	350	400	450	500	550



HOW THE AIR GETS IN AND STAYS IN

Having determined the pressure required, the next step is to see that when the tyres are inflated they are tested to ascertain that the pressure is correct. In all Dunlop motor-cycle tyres, the valve is of a type which enables the pressure to be checked. The details of the valve are illustrated.

The flow of air into the tyre depresses the little spring-controlled plunger, thus opening a free passage.

The air cannot flow out of the tyre because the return pressure closes the plunger on to its seat—and even if it should fail to do so the spring provides a positive action.

A working seal

Thus the valve core is primarily a non-return valve to facilitate inflation and pressure checking and it forms a working seal. Valve cores are inexpensive and it is a wise precaution to renew them periodically. Valve caps should always be fitted, and renewed when the rubber seating has become

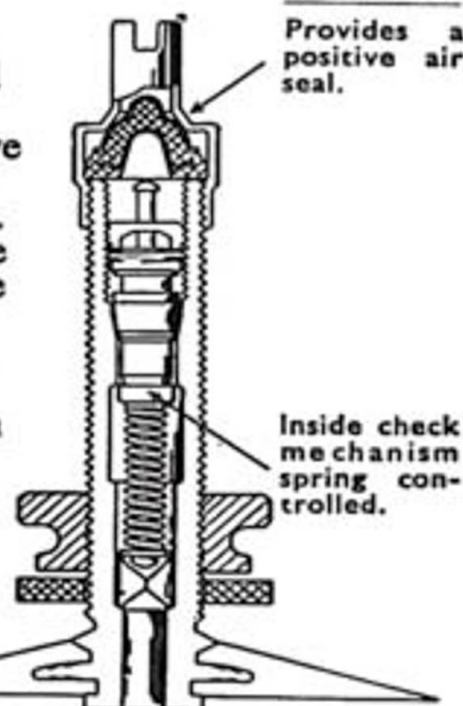
damaged by constant use. The cap prevents the entry of dirt to the valve mechanism and it forms a positive seal on the valve. It prevents leakage even if the valve core is damaged.

Caps should be screwed down firmly by hand; tools should not be used as the rubber seating may become damaged if the cap is screwed down too tightly.

If the valve core requires removing at any time for examination or renewal—first remove the valve cap, then insert the slotted end of the valve cap into the valve stem and unscrew by using it as a screw-driver.

VALVE CAP

Provides a positive air seal.





KEEPING UP THE PRESSURE

Pressures should be checked when the tyres are cold and not when they have reached normal running temperatures.

To check the pressure in the tyre, the end of the pressure gauge is pressed on to the open end of the valve. It depresses the pin or plunger, and permits air to flow into the gauge and push up the

calibrated piston showing "lb. per square inch".

The pressure gauge illustrated is specially made for the purpose. Ask for a Dunlop Pencil Type No. 6 Gauge.

Having determined the correct pressure make sure that it is maintained.

Test about once a week and restore any lost air.

Do not spoil the finest tyre in the world and prevent it from doing its duty by depriving it of the only thing which makes it pneumatic.

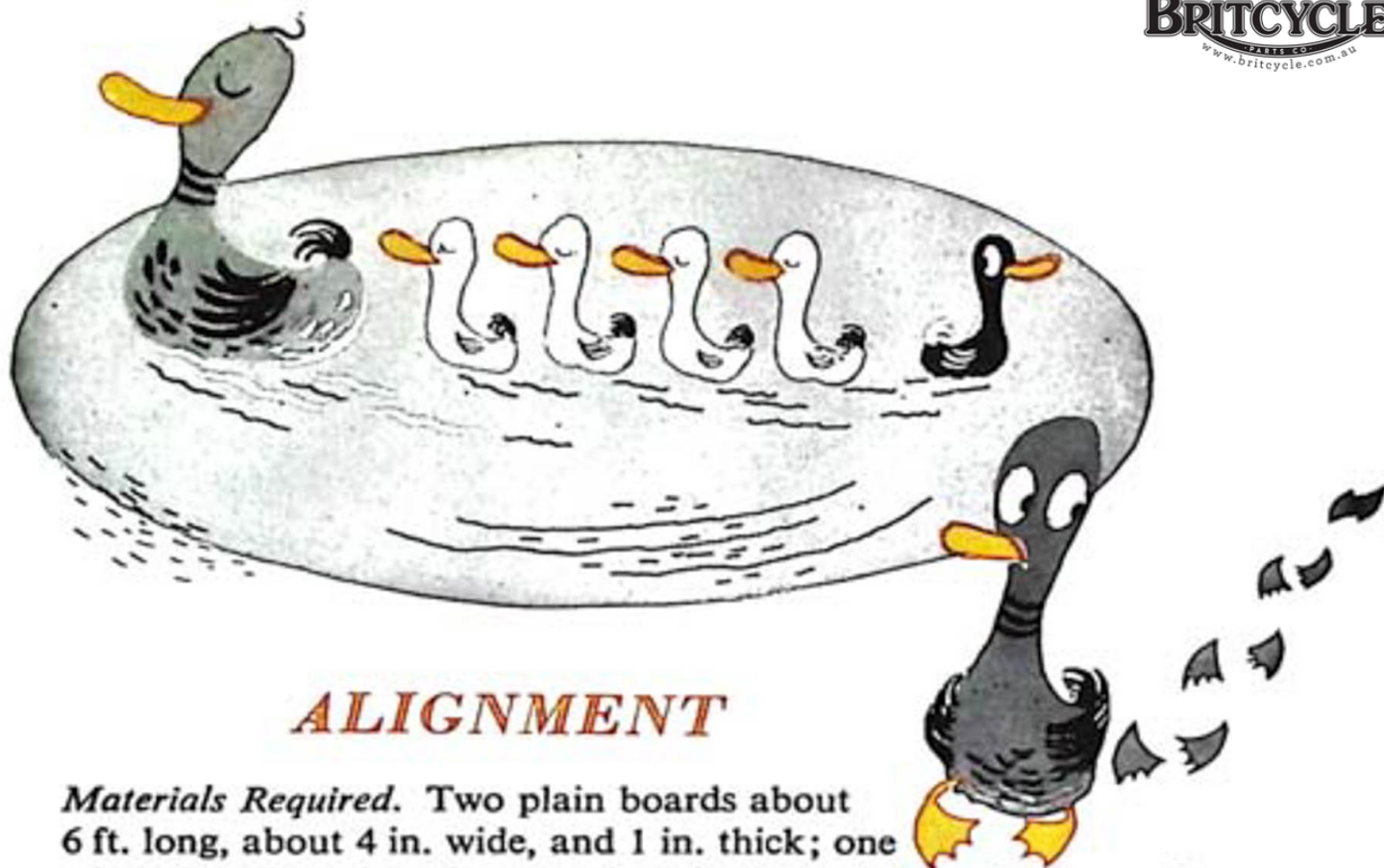
give 'em air!



DUNLOP PENCIL TYPE GAUGE

It has a Valve
Core Key in
the end of the
piston.



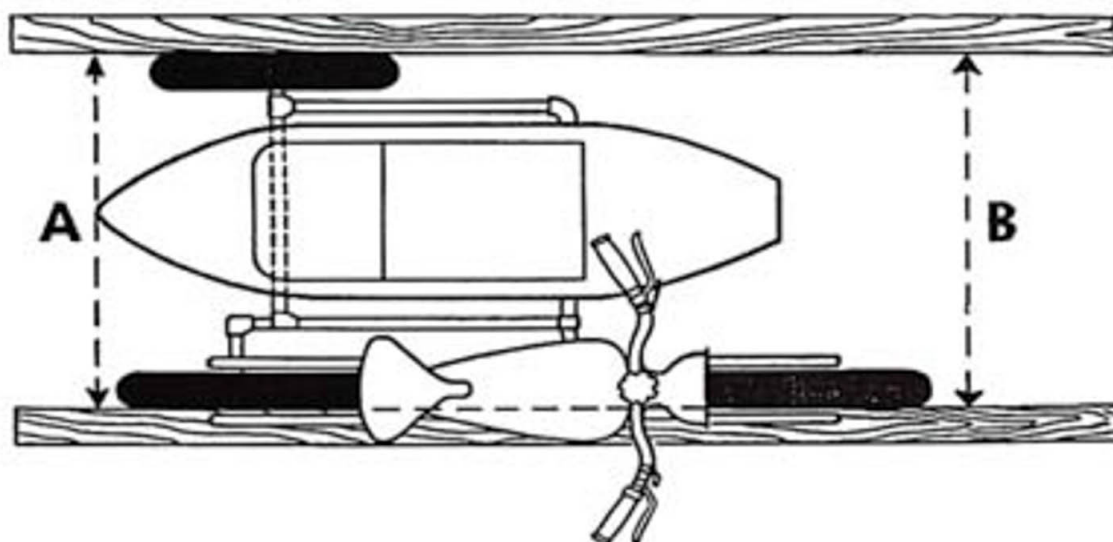


ALIGNMENT

Materials Required. Two plain boards about 6 ft. long, about 4 in. wide, and 1 in. thick; one edge of the boards to be planed perfectly straight and square. One steel measuring tape.

NOTE.—The boards should be stored flat, and care should be taken to preserve the straight edges from damage.

Procedure. The combination must stand on a flat, smooth floor of concrete, or something similar; place one of the long boards on the floor alongside the rear tyre with its straight edge touching the sides of the tyre. Straighten the front wheel until the board touches the sides of the front tyre. If the tyre cannot be made to touch the board equally then the machine is out of alignment. (If the front tyre is of smaller section than the rear, the board will not touch, but should be an equal distance from the sides.) If a Cam



type of adjustment is provided for the rear wheel the alignment cannot be at fault unless the frame is distorted, but on other machines the rear chain adjusters may have been unequally adjusted. Without disturbing anything, place the second long board on the floor with its straight edge touching along the sidecar tyre. Measure the distance "A" on the sketch, which should be taken as nearly up to the rear tyre as possible. Measure the distance "B" in a similar manner, as near to the front tyre as possible. The distance "B" should be about $\frac{1}{4}$ in. to $\frac{1}{2}$ in. smaller than "A".

OVERSIZE TYRES

When it is required to fit an oversize tyre, it is essential that the new tyre should be suitable for a rim of the same diameter and section as that on which the old tyre was fitted.

If this precaution is not taken, premature failure of both cover and tube is likely to occur.

To select a suitable size, measure the internal width between the rim flanges at the bead seat "W", as indicated in

the diagram, and consult the following table.

Each cover should be fitted with a tube having the same size description as the cover.

Before fitting larger tyres, ascertain that clearances between tyre and forks, mudguards, chain line etc., are adequate.



OVERSIZE TYRES

Rim Description	Internal Width of Rim. W (Inches)	Tyre Fittings	
		Normal	Alternative
WM0—19	1.500	2.00—19, 2.25—19, 2.375—19, 2.50—19	—
WM0—21	1.500	2.00—21, 2.375—21	—
WM0—23	1.500	2.75—23 Speedway (Front)	—
WM1—18	1.600	2.75—18, 3.00—18	—
WM1—19	1.600	2.75—19, 3.00—19	2.375—19, 2.50—19
WM1—20	1.600	3.00—20	—
WM1—21	1.600	2.75—21, 3.00—21	2.375—21
WM1—22	1.600	2.75—22 Speedway (Rear)	—
WM1—23	1.600	—	2.75—23 Speedway (Front)
WM2—16	1.85	3.00—16, 3.25—16, 3.50—16	—
WM2—17	1.85	3.25—17	—
WM2—18	1.850	3.25—18, 3.50—18	2.75—18, 3.00—18
WM2—19	1.850	3.25—19, 3.50—19	2.75—19, 3.00—19
WM2—20	1.850	3.25—20, 3.50—20	3.00—20
WM2—21	1.850	3.50—21	2.75—21, 3.00—21
WM3—18	2.156	4.00—18	3.25—18, 3.50—18
WM3—19	2.156	4.00—19	3.25—19, 3.50—19
WM3—21	2.156	—	3.50—21
3.00D × 16	3.00	4.50—16, 4.75—16	—
G Section 21" dia.	1.200	2.25—21 Autocycle	—

MOTOR SCOOTER TYRES

2.15—12	2.15	3.25—12	—
2.50C—7	2.50	3.50—7	—
2.50C—8	2.50	3.50—8, 4.00—8	—
2.50C—10	2.50	3.50—10	—
2.50C—12	2.50	3.50—12, 4.00—12	—



TAKING IT OFF

Special Note. Inextensible wires are incorporated in the beads and they cannot be stretched over the rim flanges without damage.

Fitting and removing will be quite easy if the wire beads are carefully adjusted into the rim well with each application of the lever; if it is found to be difficult, the operation is not being correctly performed.

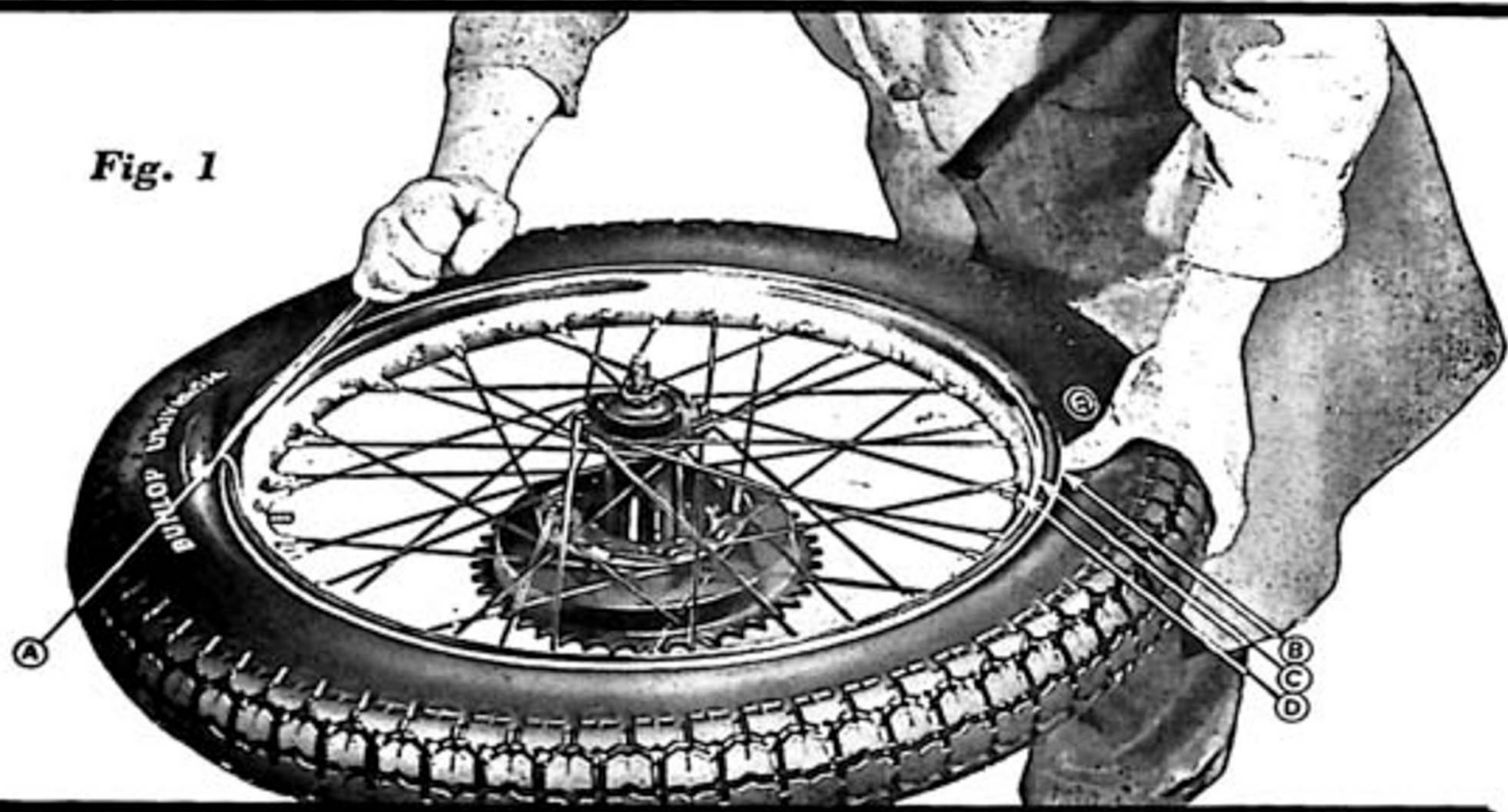
The operations are more easily carried out if the cover beads are lubricated liberally with water, preferably with a little soap added. Levers should be dipped before each insertion.

TO REMOVE TYRE

- 1** Remove valve cap and core to deflate tyre and place these parts where they will be free from dirt and grit.
- 2** Press each bead off its seat.

- 3** Insert a lever AT THE VALVE POSITION, and while pulling on this lever, press the bead into the well of of the rim diametrically opposite the valve position. Fig. 1.
- 4** Insert a second lever close to the first and prise the bead over the rim flange, holding the removed portion of the bead with the first lever.

Fig. 1



Commencing to remove the first bead. You cannot pull the cover bead at "A" over the rim flange until the cover bead at "B" is pushed off the bead seat "C" down into the well "D". Then the cover bead at "A" comes over the rim flange easily.

- 5** Remove one lever and re-insert a little further away from the first lever. Fig. 2. Continue round the bead, proceeding in small steps of 2-3 inches, until bead is completely removed.

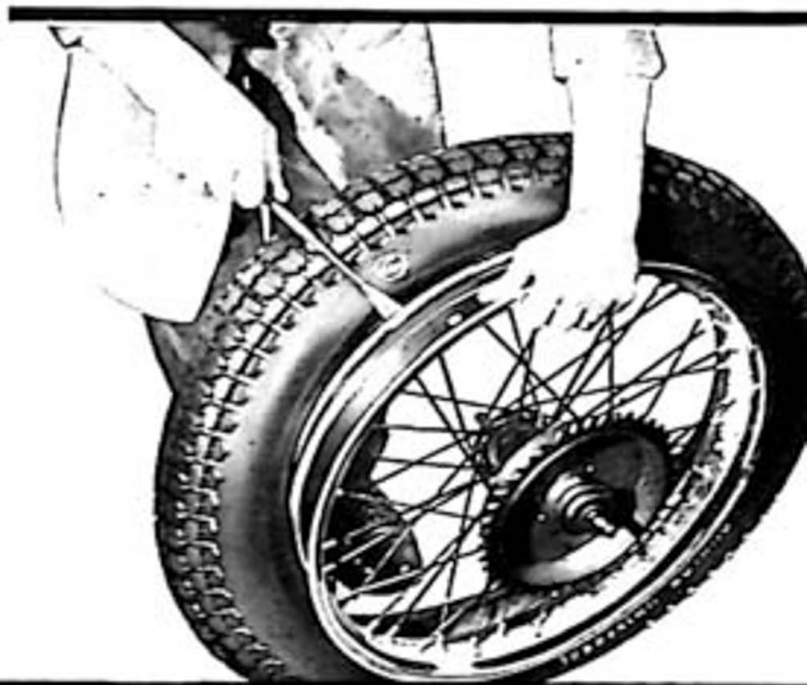
Fig. 2
Removing the first bead.



- 6** Remove tube from cover.
- 7** Stand wheel upright, and insert a lever between the remaining bead and the rim flange, and pull the cover back over the flange. Fig. 3.
If difficult to remove, maintain the pressure on the lever and tap the beads with a rubber mallet where they pass over the top of the flange.

Fig. 3

*Removing the cover.
(Final operation.)*



PUTTING IT ON

Before a new or used cover is fitted it should be examined internally to make sure that no loose objects have been left inside. Used covers should be thoroughly examined externally and internally for nails, flints, cuts or other damage.

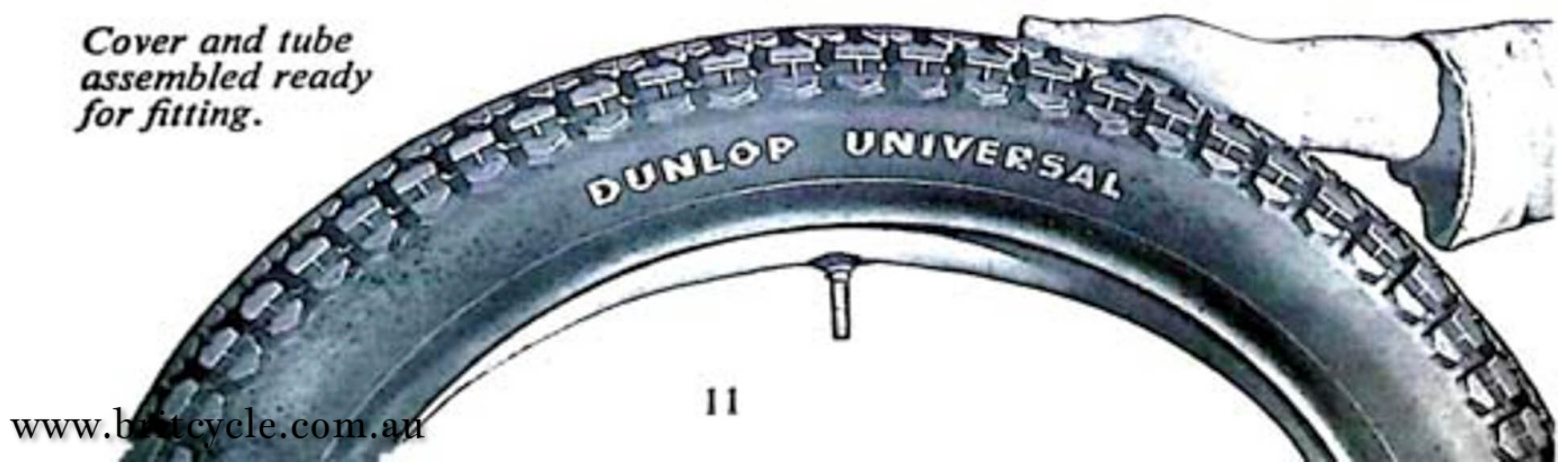
To assist smooth riding, precise steering and tread life, Dunlop motor cycle tyres are balanced to prescribed limits. Some new tyres are fitted with balance adjustment rubbers inside the casing before leaving the factory. They are not repair patches and should not be removed. By fitting the tyre so that the white spots near the cover bead are at the valve position, a high degree of tyre balance is achieved. If, however, a security bolt is fitted the white spots should be at the security bolt position. If two security bolts are fitted the white spots should be mid-way between the security bolts. Make sure that the rough side of the rubber rim band is fitted against the rim and that the band lies centrally in the well of the rim. If the edges of the rim band become trapped between the tyre bead and the rim, distortion and failure of the tyre may result.



- 1** Inflate tube just sufficiently to round it out without stretch. Too much air will make tyre fitting difficult. Too little will make tube more liable to be nipped by levers.
- 2** Dust the tube with French chalk and insert the tube in the cover, with the white spots near the cover bead at the valve position, or if security bolts are fitted, as indicated above.
- 3** Pull tube slightly out of cover at valve position so that it protrudes about 1 inch beyond the beads for a length of about 9 inches. Fig. 4.

Fig. 4

Cover and tube assembled ready for fitting.



FOR WHEELS FITTED WITH SECURITY BOLTS

To Remove Tyre

- 1** Deflate tyre as already described.



- 2** Remove nut(s) on security bolt(s) and push bolt(s) inside the cover.
- 3** Remove first bead as already described.
- 4** Remove security bolt(s) from rim.
- 5** Remove tube from cover.
- 6** Continue operations as already described.

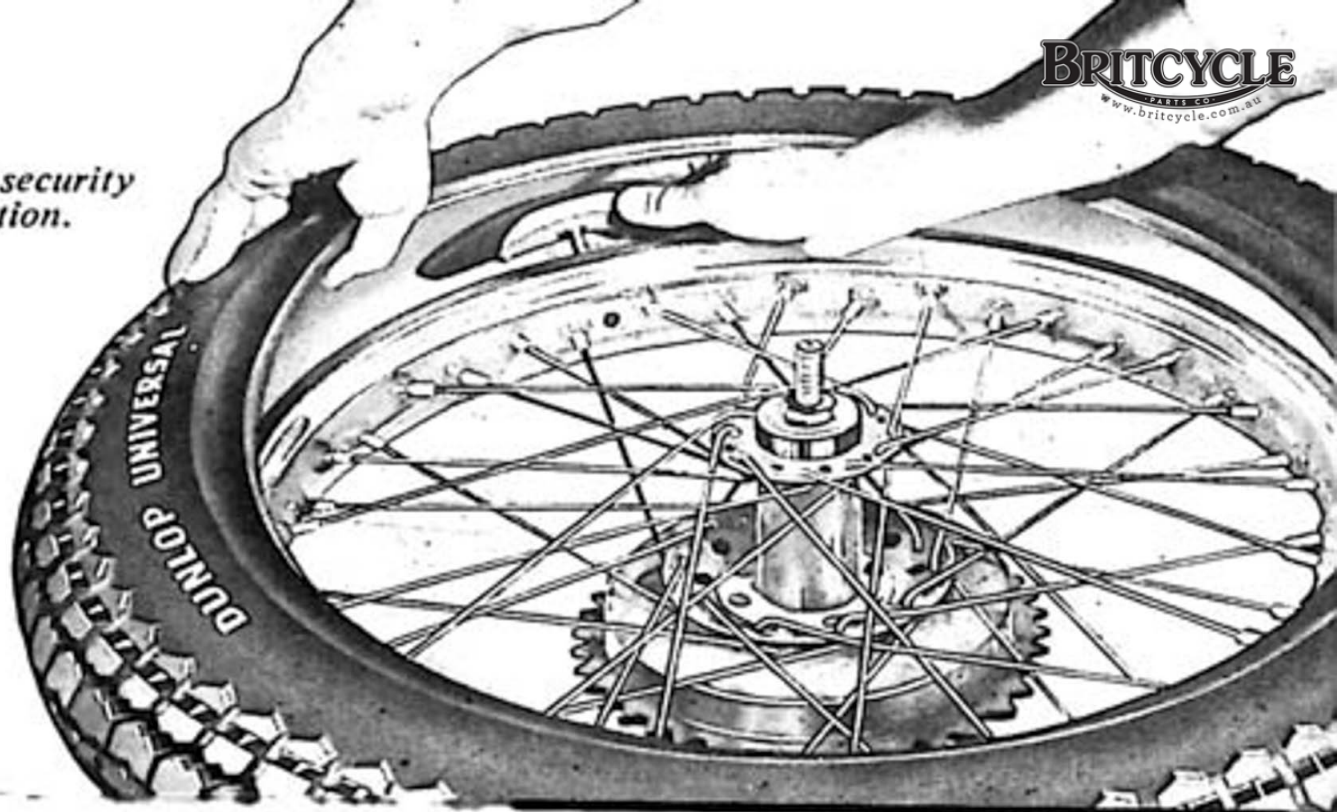
To Fit Tyre

The security bolt is normally fitted diametrically opposite the valve, but in some instances the two holes may be found to be only 9 inches apart.

For racing and competition purposes it is usual to fit two security bolts and the holes for these and the valve hole are 120° apart.

Fig. 9

Placing the security bolt in position.



- 1** Fit first bead as already described, **BUT WITHOUT THE TUBE INSIDE THE COVER.** Make sure that the white balance spots are at the correct position. See page 11.
- 2** Place security bolt(s) in position. Fig. 9.
- 3** Fit tube in cover as already described.
- 4** Fit the second bead as already described. As the security bolt(s) position is reached, push it well into the cover and make sure the tube is resting on the flap of the security bolt and not overlapping the sides. Fig. 10. Always start fitting the cover diametrically opposite the valve, finishing the fitting at the valve position.
- 5** Inflate tyre slowly to required pressure. Fit knurled rim nut and valve cap.
- 6** Bounce wheel at point(s) where security bolt(s) are fitted, then tighten nut(s) on security bolt(s) with $\frac{5}{16}$ in. Whit. spanner.

Fig. 10

Completing the fitting of the second bead, pushing the security bolt into the cover and making sure that the tube is resting on the flap of the security bolt and is not overlapping the sides.



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HOW TO KEEP YOUR MOTOR-CYCLE TYRES FIT

*has been issued by **DUNLOP RUBBER CO. LTD***

in the interests of better tyre performance

