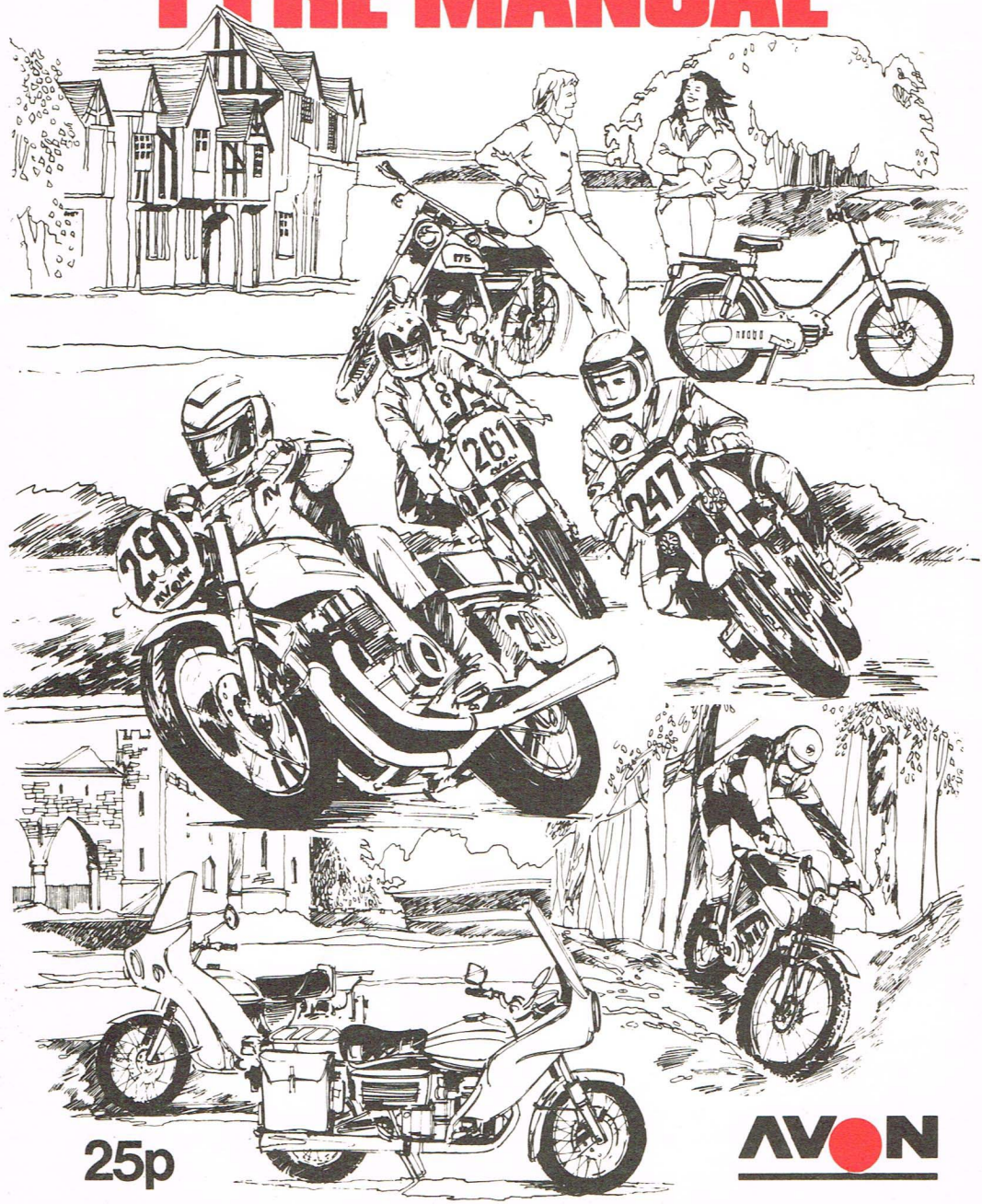
AVON MOTORCYCLISTS TYRE MANUAL



25p

AVON

Here's where you can get AVON Advice

The dealer from whom you buy your AVON tyres is always ready to help you. But if you would like specialist services, or advice from AVON staff experts, you are invited to write, phone or call at any of the AVON depots listed below.

Aberdeen
(sub depot) 236a Market Street, Aberdeen AB1 2PR. Tel: Aberdeen 28811 and 23693

Belfast
Avon Tyres (N.I.) Limited, Knockmore Industrial Estate, Moira Road, Lisburn, Co. Antrim.
Tel: Lisburn (STD 02382) 78321

Birmingham
Granby Avenue, Garretts Green Industrial Estate, Birmingham B33 0SY.
Tel: 021-783 9051/4

Bristol
30 Vale Lane, Bristol BS3 5RX.
Tel:Bristol (STD 0272) 662201/5

Cardiff
(sub depot) Whittle Road, Cardiff CF1 8AT.
Tel: Cardiff (STD 0222) 42916/7

Chelmsford
(sub depot) Hanbury Road, Widford Industrial Estate, Chelmsford.
Tel: Chelmsford (STD 0245) 54802/4

Croydon
Bute Road, Croydon CR0 3RT.
Tel: 01-686 2651/7

Dublin
Avon Tyres (Ireland) Limited, Unit 4B, Kylemore Industrial Estate, Killeen Road, Dublin 10. Tel: 366244/5

Gateshead
Saltmeadows Road, Gateshead NE8 3BH.
Tel: Gateshead (STD 0632) 773395/6/7

Glasgow
39 Southcroft Road, Rutherglen, Glasgow G73 1TL. Tel: 041-647 9524-28

Leeds
Pontefract Lane, Leeds LS9 0RD.
Tel: Leeds (STD 0532) 34471/3

Manchester
8 Blantyre Street, off Chester Road, Manchester M15 4LH.
Tel: 061-834 4623/4/5

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Tel: Norwich (STD 0603) 33695 and 35673

Nottingham
(sub depot) Wingate Close, Glaisdale Drive East, Apsley, Nottingham NG8 4LG.
Tel: Nottingham (STD 0602) 292481/2

Reading
(sub depot) Commercial Road, Reading, RG2 0ST.
Tel: Reading (STD 0734) 861411/5

Watford
Garnett Close, off Greycaine Road, Watford WD2 4UU.
Tel: Watford (STD 0923) 26683/7

INTRODUCTION

Avon made their first motorcycle tyre around Sixty years ago. Since then the Avon name has become synonomous with the very best in bike tyres.

A reputation that has an enviable list of achievements to back it up.

In fact, no less than 32 world motorcycle championships and 77 world records have been won on Avon tyres.

Successes like these were born long before the bikes even lined up on the grid.

They were born in our laboratories, on our test rigs and in exhaustive road testing.

And the skill and knowledge that went into winning race after race now goes into the production of our everyday road tyres. Tyres like the great Roadrunner, tubed and tubeless, the Speedmaster Mk II and SM Mk II.

This manual tells you all you need to know.

August 1978

Roadrunner, Speedmaster MK11, SM. MK 11 and Mudplugger

Roadrunner
Tubeless and
Tubed

Speedmaster
MkII
Tubed

Mudplugger
Tubed

S.M. MkII
Tubed

Roadrunner, Speedmaster MK11, SM. MK 11 and Mudplugger

Roadrunner

The Roadrunner has been specifically designed for both front and rear wheels of the modern super-bikes with their high acceleration and braking torques. The nylon fabric casing makes the tyre suitable for speeds up to 130mph while the wrap around tread gives grip even when the machine is fully "laid-over".

The tyre's low profile gives excellent stability at all speeds whilst the continuous tread pattern provides a smooth ride and high mileage. The circumferential centre groove gives improved steering characteristics and to ensure adequate water drainage, all the grooves have been designed to remain open at all times.

The combination of this feature, the tread sipes, and the high hysteresis tread compound provide excellent wet road adhesion.

To obtain in full the high performance of which Roadrunner tubeless/tubed tyres are capable, the direction of rotation is important. (See fitting instructions on page 10).

Speedmaster MkII

The Speedmaster MkII is intended for front wheel fitment providing positive steering and good lateral stability, its unique contour makes for long life with even wear. The continuous, siped and interrupted ribs in cling tread rubber give high braking and handling efficiency under wet conditions. For speeds up to 95mph (150 km/h) use the loads and pressures recommended on page 24. For sustained speeds up to 113mph (180 km/h) increase the recommended pressure by 4 psi (.25 kg/cm^2). The Speedmaster MkII is the ideal complement to the SM MkII rear tyre.

S.M. MkII

The SM MkII is intended primarily for rear wheel fitment where it will give high mileage. The continuous centre rib, flanked by rows of interlocking studs, provide excellent traction, safe handling and a smooth ride. Good adhesion under wet road conditions is provided by the cling rubber tread compound used in all S.M. MkII tyres. For speeds up to 95mph (150 km/h) use the loads and pressures recommended on page 24. For sustained speeds up to 113 mph (180 km/h) increase the recommended pressure by 4psi (.25 kg/cm^2). The SM MkII is the ideal complement to the Speedmaster MkII front tyre.

Mudplugger

The Mudplugger conforms to A.C.U. regulations and features modified shoulder blocks producing improved camber grip. With a special tread compound resistant to cuts it is produced in the two most popular sizes – 3.00 – 21 and 4.00 – 18.

The effect of differing conditions on tyre performance

Variations in tyre performance are primarily due to different conditions of service, such as speeds, road surfaces and the varying degree of care which tyres receive during their life. The information on the following pages will help you to obtain the satisfactory mileages and reliability inherent in Avon tyres.

How to get the best results from your tyres

1 Select the correct tyres for your machine:- Standard motorcycle tyres, as the 'S' speed rated MK.II and SM.MK.II in good conditions at correct pressures for the loads are suitable for speeds up to 95 mph (150 km/h) and for sustained speeds up to 113 mph (180 km/h) at increased pressures.
For higher speeds up to 130 mph (210 km/h) use 'H' rated Roadrunner tyres or 'H' rated Speedmaster tyres at the recommended pressures.

2 Pressures are vitally important:- Keep your tyres inflated to the correct pressures for load and speed as shown in your motor cycle manufacturer's hand book.

3 Pressure testing:- Test pressures when tyres are cold, at least once a week with an accurate tyre pressure gauge. Do not "bleed" pressures when tyres are hot as pressures rise due to heat but fall again when the tyres cool.

4 Valve Cores and Caps:- Loss of pressure may sometimes be due to valve cores not seating properly or being worn. Check valve cores, tighten for correct seating or replace as necessary. Always fit valve caps (finger tight) as they keep dust from the valve mechanism and act as an extra seal.

5 Tubeless valves should be in good condition and should be replaced when a new tyre is fitted.

6 In the case of wire wheels:— Ensure that rim tapes are in good condition; a protruding spoke head can damage a tube and cause a puncture.

7 Alignment:- Ensure that wheels are correctly aligned.

How to get the best results from your tyres contd.

Inspect tyres regularly:- Be aware of your tyres, examine them regularly and before any long journey. Worn tyres are more susceptible to damage and road holding is reduced in the wet. To maintain full stability on high performance machines it is advisable to change the tyres before the legal 1 mm remaining pattern depth is reached.

8 Remove any damaged tyres:- Damage which exposes the casing is dangerous and contravenes the tyre legislation.

9 Remove stones from treads:- Remove any stones or nails which may become embedded in the treads of the tyres. If left they will eventually penetrate through the casing and cause a puncture leading to a breakdown on the road.

10 Remove oil and grease:- Oil and grease have a deleterious effect on rubber, remove any from your tyres with a cloth slightly damped with petrol.

11 Care of tubes:- Tube repairs should be done by a repair expert and should be vulcanised, hot or cold process. It is recommended that a new tube should be fitted with a new cover. Tubes which have given long service become stretched and when fitted to a new cover may fail prematurely because of creasing or thinning of the tube rubber. Tubes with several repairs should be discarded.

12 Tyre/wheel assembly balance:- Avon tyres are made to fine tolerances but it is essential that the tyre/wheel assemblies should be balanced if high speed runs are contemplated. The wheels themselves should run true to within 1 mm and be free from buckles. Tubeless Tyre and wheel assemblies can be balanced by using self adhesive or clip-on weights. Wire wheels should be balanced by using spoke nipple weights, or by wrapping the outer end of the spoke adjacent to the light spot with lead wire until the wheel, freely rotating on its bearing, shows no tendency for one particular section (a heavy spot) to swing to the bottom-most point. If using lead wire bind the lower end with adhesive tape to prevent it moving. Fine balance is more important on front than rear wheels.

13 Drive reasonably:- Excessive acceleration and braking shortens tyre life considerably. Some uneven wear on front tyres is inevitable due to the effects of braking and cornering particularly if the machine is used to its full capacity.

Conditions affecting tread wear

A summary of the different factors that can cause abnormal wear is given below.

Underinflation/Over-loading

These conditions, singly or in combination, cause undue tread distortion resulting in irregular wear. More seriously they may result in the sudden failure of the casing due to excessive tyre flexing.

Speed

High speed means rapid tread wear, not only because of the speed itself but because of the harder acceleration and extra braking entailed.

Climatic conditions

Tread wear is usually more rapid in summer than in winter because of the higher ambient temperatures and drier conditions of the roads.

Oil and grease

Tread rubber rapidly absorbs oil and grease and its resistance to wear deteriorates in consequence.

Stopping and starting

Fierce acceleration and hard braking subject the tread to severe strains; rapid wear results.

Road surfaces

Rough road surfaces mean cut treads and lower mileages.

Mechanical irregularities

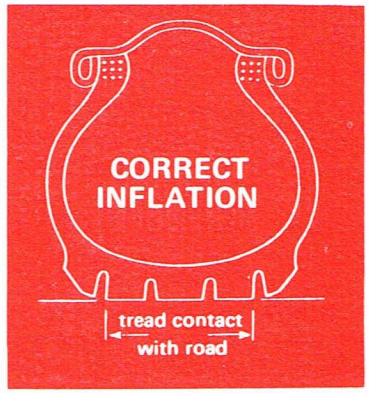
Mechanical defects which cause severe tread wear are distorted wheels, incorrect brake adjustment, worn dampers, tolerances on steering head and swinging arm bearings and frame/wheel alignment.

Unbalanced wheels

Any unbalanced rotating weight such as heavy spots on the rims, security bolts etc., can cause irregular tread wear.

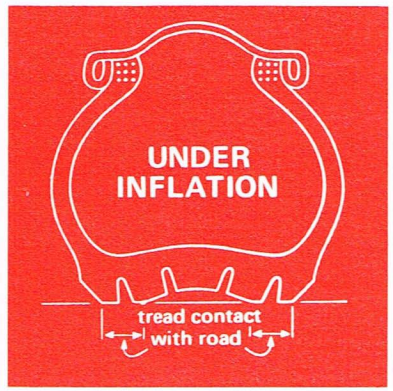
The importance of correct inflation

Tyre pressures govern tyre life. They also have a profound effect on stability and anti-skid properties. The compressed air within the tyre assembly carries the load.



Correct Inflation

The correct pressure ensures maximum mileages with satisfactory cushioning, stability and road holding properties. The tyre is kept at the contour at which it was designed to run.

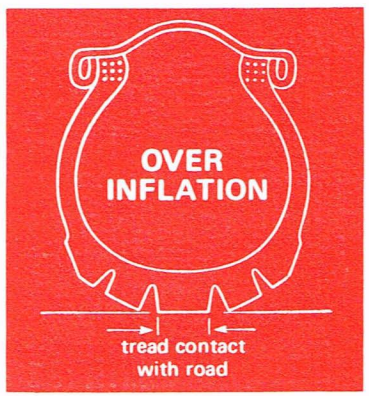


Underinflation

Insufficient air pressure accelerates tread wear and throws undue stress on the tyre casing. It also increases the risk of accidental damage, adversely affects handling and increases power absorption.

Over-Inflation

Excessively high pressure causes rapid wear in the centre of the tread. There is also a greater danger of casing fracture and tread cutting.

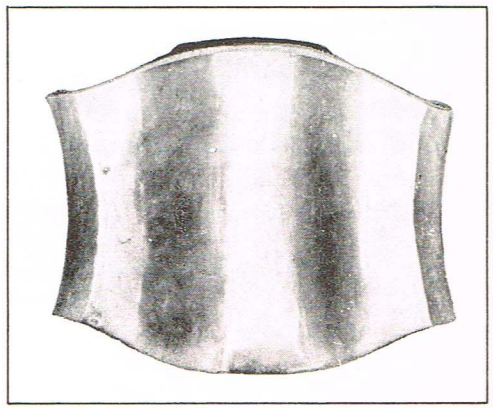


Effects of Underinflation

Underinflation as already described is a common cause of premature casing failure and irregular tread wear. Prolonged running can also lead to cracking of the rubber sidewalls due to excessive flexing. Tyres should be maintained at the pressures specified in the machine manufacturers handbook. In the event of recommendations being unobtainable (refer to Pressure Tables on pages 24/25)

Underinflation

This photograph shows the darkening of the tyre casing and is clear evidence of serious underinflation. If the condition of underinflation persists the casing will eventually rupture.



Complete destruction due to underinflation

Here is a tyre completely ruined through being run deflated. This has caused the complete separation of the cords of the casing, as shown in the photograph.

Two common causes of damage

Below are described two common causes of accidental damage

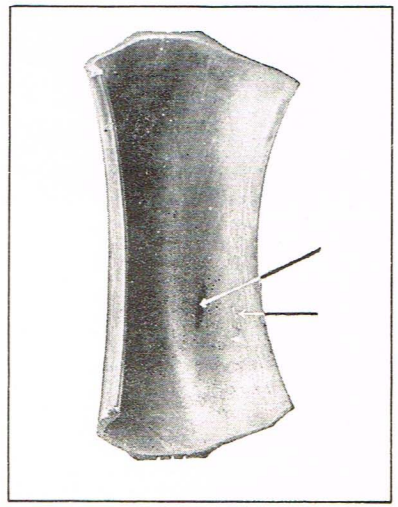
Concussion fracture

This illustration shows a characteristic Concussion Fracture of the tyre casing due to a severe blow from a road obstruction. Frequently in such a case the tread is undamaged, there is no outward sign of trouble, and failure can occur sometime after the impact. Over-inflation or underinflation makes tyres more susceptible to concussion fractures.

If a tyre has sustained a severe blow it is essential to remove it and check the casing for damage.

Double fracture

In this case the blow has been so severe as to crush the cover wall between the rim and a road obstruction; a double fracture of the casing has resulted. In failures of this type there is frequently a condition of Underinflation. Keep your tyres inflated to the correct pressure and the risk of such damage will be minimised.



To remove and fit Roadrunner tubeless tyres

WARNING:– For tubeless application only "MT" or "TL" profile rims must be used.

It is essential that before deciding to use tubeless tyres, the machine owner must establish that his wheels are suitable. If the wheels were supplied as original equipment with tubeless tyres fitted then they should be satisfactory. If, on the other hand, the wheels were supplied as original equipment, but fitted with tubed tyres, the machine manufacturer must be consulted before attempting conversion to tubeless tyres. In the case of after-market wheels the wheel manufacturer will be able to advise regarding suitability for tubeless tyre fitment.

This applies to cast alloy/composite wheels only. Tubeless tyres must not be fitted to wire spoked wheels unless a tube and a rim band are used.

To remove tyre

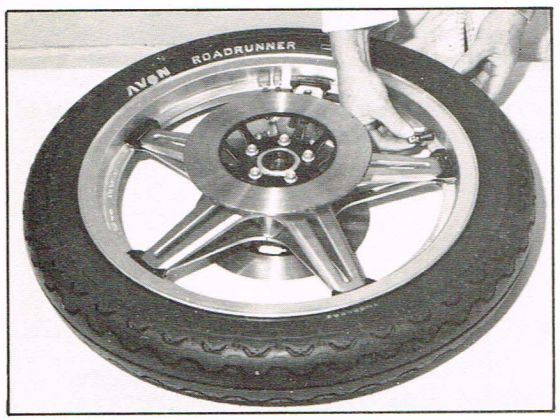


Illustration A1

1. Remove valve cap and valve core and allow the assembly to deflate. (Illus. A1 and A2)

Illustration A2

To remove and fit Roadrunner tubeless tyres contd.

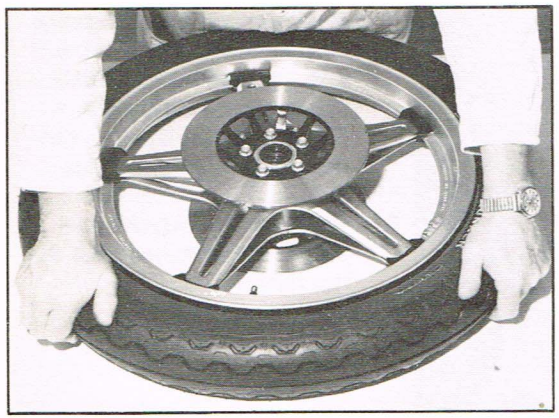


Illustration B

2. Push each bead off the shoulders of the rim. (Illus. B)

3. At the point diametrically opposite the valve ease the edge of the tyre down into the well of the rim and insert a small tyre lever at the valve position and lift up the tyre bead. (Illus. C)

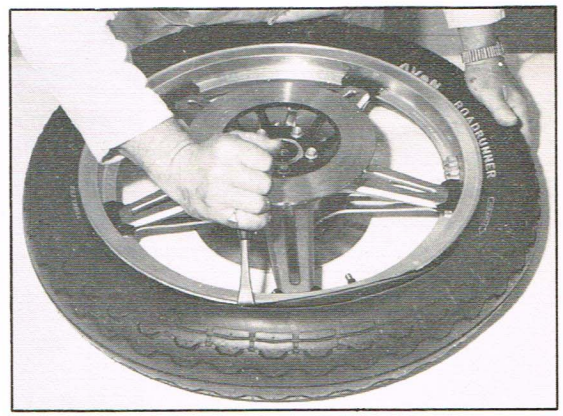


Illustration C

To remove and fit Roadrunner tubeless tyres contd.

Illustration D

4. Hold the lever down with one hand and, with the other insert a second lever a short distance away. Lift the top bead of the tyre over the rim flange with this lever. (Illus. D)

5. Repeat this in easy stages until the bead is free from the rim flange.

6. Finally, lever the second bead from the rim. (Illus. E)

7. Check tubeless valve for correct fitment and durability.

8. Remove any balance weights from wheel.

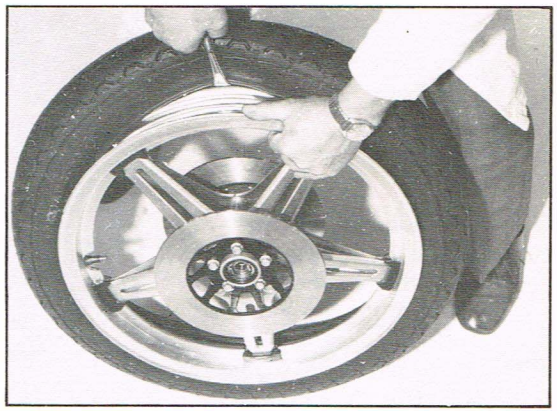


Illustration E

To fit tyre

1. Check valve unit for correct type and serviceability. If in doubt, or when fitting a new tyre, replace the unit. Lubricate bottom bead with a recommended lubricant, but do not use an excessive amount as this can result in bead 'creep' in service. Check for 'Tubeless' marking and distinctive coloured inner lining.

To remove and fit Roadrunner tubeless tyres contd.

2. Place tyre on top of the wheel and ensure that the directional arrow is pointing in the correct direction according to whether the wheel is for the front or rear of the machine. Ensure that no foreign matter is left inside the tyre. (Illus. F)

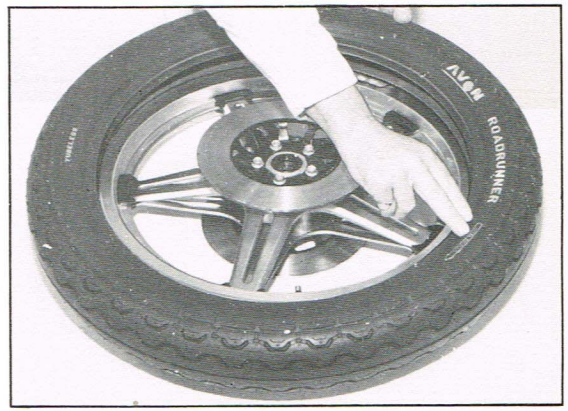


Illustration F

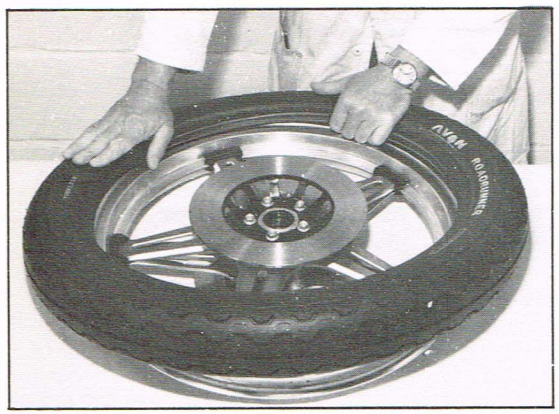


Illustration G

3. Allow the lower bead to sink into the well of the rim and the upper bead to remain above the upper rim flange. (Illus. G)

To remove and fit Roadrunner tubeless tyres contd.

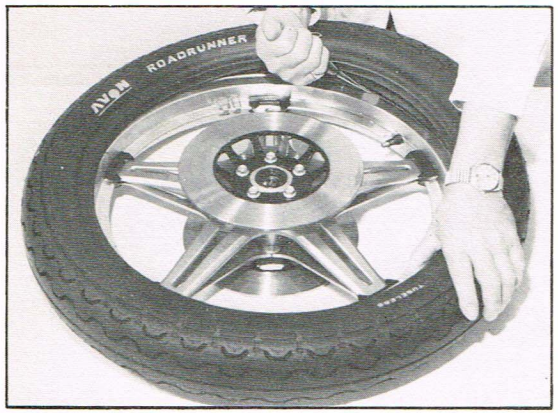


Illustration H

4. Working from each side of the point opposite the valve, by using both hands, press the remainder of the lower bead over the rim flange. A small tyre lever may be used to complete the operation. It is important to ensure that the tyre bead area diametrically opposite the fitting point is always in the base of the rim well. (Illus. H)

5. To fit the second, or upper, bead the method is similar to that described for the first, or lower, bead except that it is important to start from a point diametrically opposite the valve.
As previously, lubricate the bead of the tyre and ensure that it is down into the well of the rim and then work round the circumference in both directions until only a small portion of the tyre remains unfitted near the valve. This last piece may be gently lowered over the rim with the careful use of a small lever.
If considerable force is required this indicates that the opposite bead of the tyre is not down in the well of the rim and the fault should be corrected. Unnecessary force

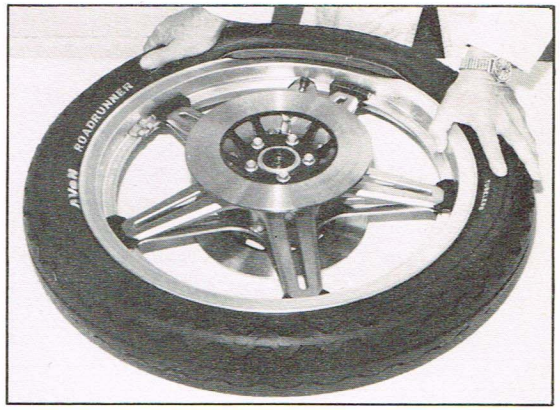


Illustration I

To remove and fit Roadrunner tubeless tyres contd.

may damage the tyre beads or rim flanges, particularly if of alloy manufacture.
(Illus. I and J)

6. Ensure that tyre is evenly fitted all round.

7. Moisten tyre beads and inflate to a maximum of 40 p.s.i. 2.80 bar.

8. As rims may have tapered, contre pente or hump safety ledge features the beads may not seat correctly even at 40 p.s.i. 2.80 bar. In such a case deflate the tyre, loosen the beads and re-lubricate before reinflation. When inflated check that moulded tyre sidewall rim-fit lines are concentric with the rim flange on both sides of the assembly.

9. Set pressure at correct level for the machine.

10. Rebalance assembly as required.

11. NOTE: Where tyres have been compressed in storage the beads may not be sufficiently separated for easy inflation. In such a case a tyre tourniquet may be required to obtain initial bead sealing. (Illus. K)

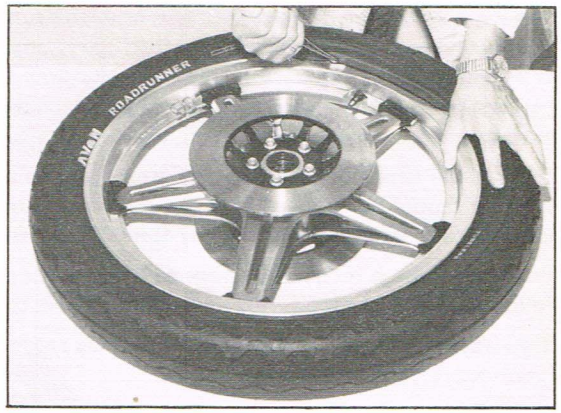
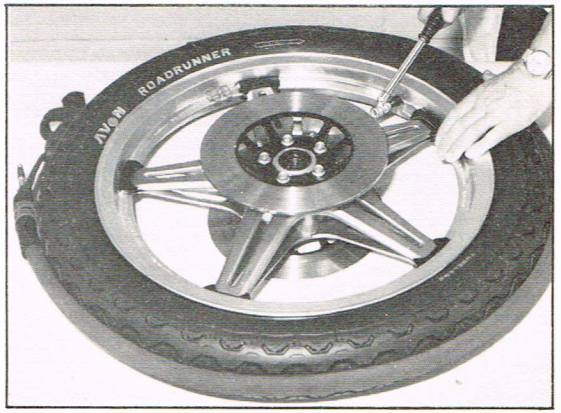


Illustration J

Illustration K



Repairs to Roadrunner tubeless tyres

The main advantage of a tubeless tyre is its ability to accept penetration by nails etc., without loss of air. This means that the rider is unaware that his tyre has been punctured. If he continues to ride for long distances, the area of damage will spread and could become serious. Tyres must therefore be inspected regularly for nails etc., and repair executed as quickly as possible.

In instances where deflation has occurred, such as a nail penetration, it is essential that the tyre should be removed from the rim and given a full external and internal examination before attempting any form of temporary or permanent repair.

Providing there is no other damage to the tread or casing we would recommend only the following types of repair. It is essential to follow the material manufacturers instructions.

1. A combined mushroom head type plug repair, providing the penetration does not exceed 3 mm diameter.
2. Repair by buffing the tubeless lining and applying a cold cure, or vulcanised repair, of minimum 25.mm diameter to seal a penetration of not more than 3 mm diameter. The external hole should be sealed with rubber sealant to prevent the ingress of moisture which could affect the casing cords.

N.B. Temporary repairs are unlikely to be corrected after the event and straight plug type repairs must not be attempted as there may be insufficient tread rubber and casing material to provide sufficient security for the plug location.

In the event of an emergency 'get you home' repair it is permissible to use an inner tube of the correct size and type but the Motorcycle Manufacturers' Instruction Manual should be consulted as, in some instances, an adaptor collar may be required to be fitted where rubber car type tubeless valves of greater diameter than the standard metal type used on tubes have been used originally.

For repairs other than those already described a tyre expert in permanent repairs should be consulted. If any major reinforcement is required to repair the damage the tyre must not be used, particularly on a high performance machine, because of possible problems with impaired vehicle stability and unbalance affect at speed.

These recommendations may appear to be over-cautious, but riders who have experienced sudden tyre deflation will appreciate how dangerous it can be.

To remove and fit tubed tyres

The following hints will help you in the removal and fitting of tyres.

It is important to avoid undue force with levers as this will damage the inextensible wire beads. The important point is to make full use of the well of the rim.

When the tyre is in position and fully inflated the beads rest on the shoulders of the rim. The design of the rim facilitates fitting as it allows part of the circumference of the tyre bead to be dropped into the well while the part diametrically opposite is pushed over the flange.

Lubrication of the beads with slightly soapy water, will help fitting and removing.

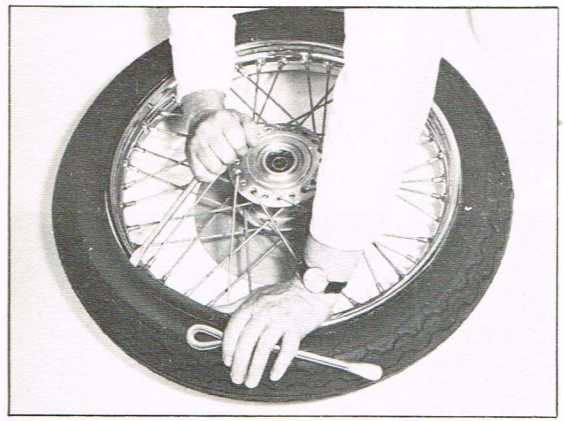


Illustration L *Note: Valve depressed by thumb*

To remove tyre

1 Remove valve cap, valve core and rim nut, and allow tube to deflate

2 Push each bead off the shoulder of the rim.

3 At a point diametrically opposite the valve, ease the edge of the cover down into the well of the rim, then push the valve stem in as far as it will go and insert a small tyre lever at the side of the valve and lift up the cover. (Illus. L)

4 Hold down the lever with one hand, and with the other insert a second lever a short distance away. Lift top bead of the cover over the rim with the lever. (Illus. M)

5 Repeat this in easy stages until the bead is free of the rim. Withdraw the tube, starting from the side opposite the valve.

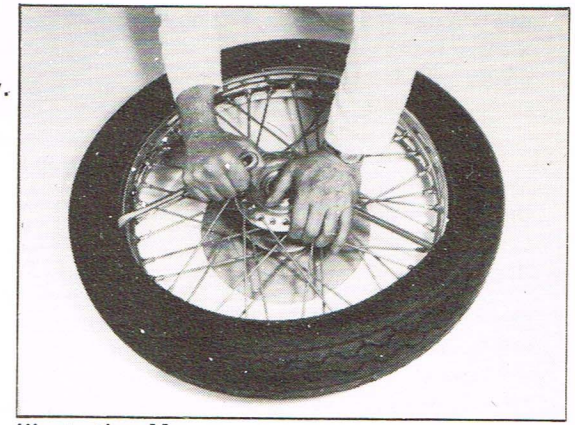


Illustration M

To remove and fit tubed tyres contd.

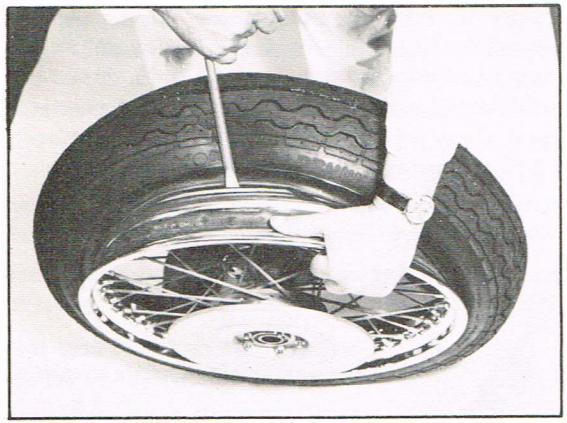


Illustration N

6 Finally, lever the second bead from rim. (Illus. N)

To fit tyre

1 Remember to use small tyre levers, and not to use undue force.

2 Check that the tyre and tube are sound. Make sure that nothing such as grit, wrapping paper or labels is left inside the cover, as this will damage the tube. Fitting is easier if the tube is dusted lightly with french chalk.

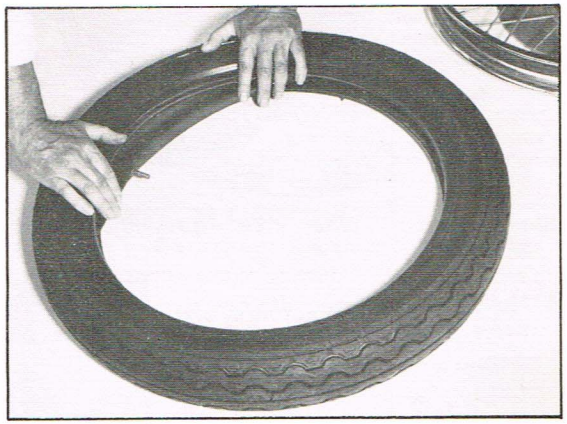


Illustration O

3 Slightly inflate tube and slip into the cover, making sure that the tube is not creased or twisted (Illus. O)

4 Place the cover, with the tube inside, on top of the wheel with the valve in line with the valve hole in the rim.

As direction of rotation is important Roadrunner tyres are marked on each side to indicate the recommended direction of rotation according to whether it is fitted to the front or rear wheel of the machine.

To remove and fit tubed tyres

5 Thread the valve through the valve hole (Illus. P). Allow the under bead to sink into the centre base of the rim and the upper bead to remain outside.

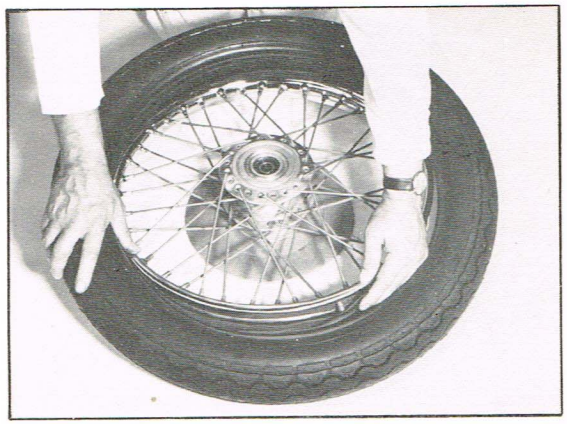


Illustration P

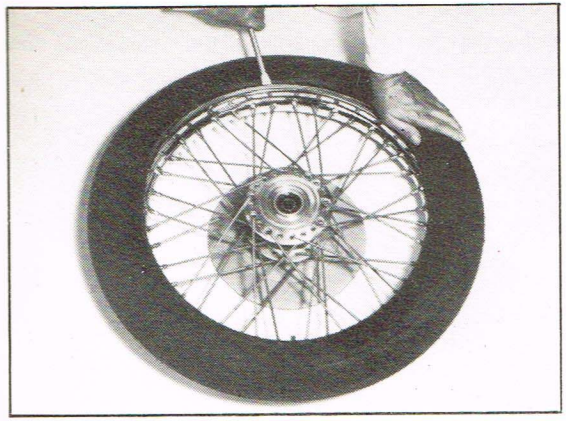


Illustration Q

6 Working from each side of the valve and using both hands, press the remainder of the under edge of the bead over the rim. A lever may be used to complete the operation (Illus. Q). It is important to ensure that the bead area diametrically opposite the fitting point is always in the base of the rim.

To remove and fit tubed tyres contd.

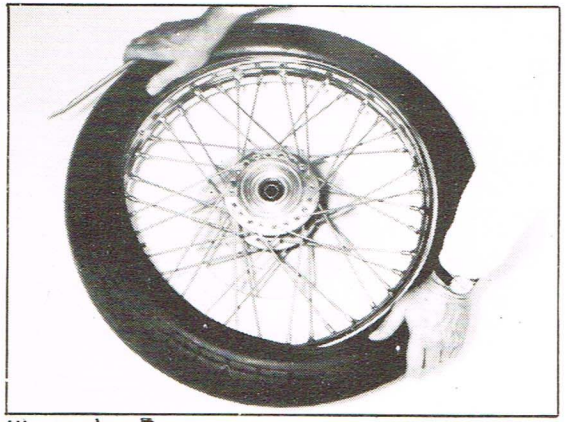


Illustration R

7 To fit the second or top bead, the method is similar to that described for the first or under bead, except that it is important to start from a point diametrically opposite the valve.(Illus. R)

As before, see that the edge of the cover is down in the well of the rim and then work round in both directions until only a small portion of the cover by the valve remains. This last piece may be gently levered over the rim, simultaneously depressing valve slightly. (Illus. S)

If considerable force is required it means that the opposite edge of the cover is not down in the wellbase of the rim and the fault should be corrected. Unnecessary force tends to damage the tyre and may break the wire beads.

8 Push valve inwards to make sure that the tube near the valve is not trapped under the bead. Pull valve finally back into position.

9 Make sure that the cover is evenly fitted all round, and that the valve protrudes squarely through the valve hole.

10 Inflate to approximately 2.1 kg/cm^2 (30 psi.)

11 Deflate and check that valve is not trapped. Fit rim nut.

12 Inflate to recommended pressure, check that fitting lines on cover run true with rim, tighten valve rim nut and fit valve cap finger tight.

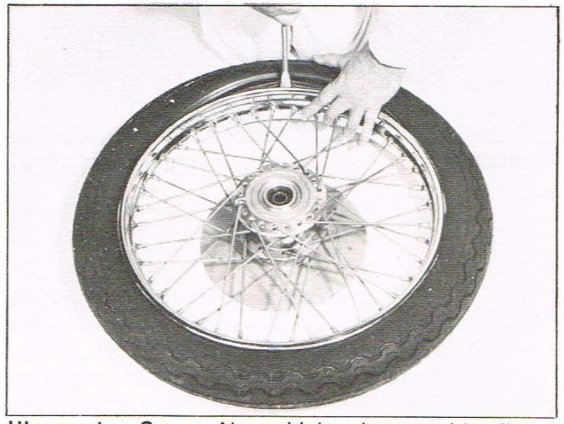


Illustration S *Note: Valve depressed by finger*

To remove and fit tubed tyres contd.

For wheels fitted with Security Bolts

To remove tyre

1 Proceed as for normal tyre removal, and deflate tyre.

2 Remove security bolt nut and push bolt inside cover. Where more than one security bolt is fitted deal with each similarly.

3 Remove first bead, remove security bolt(s) from inside cover.

4 Remove tube from cover and cover from rim, as already described.

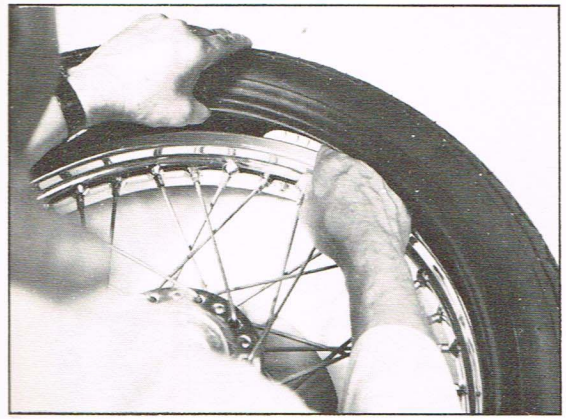


Illustration T

To fit tyre

1 Insert tube into cover and fit first bead as previously described.

2 Lift top bead by hand and fit security bolt(s) into cover, threading stem(s) through hole(s) and taking care not to damage the tube (Illus. T).N.B. When one bolt only is fitted this is usually positioned approximately 9" ahead of the valve, and leads the valve when the wheel is rotated in its normal forward direction.

3 Make sure that the tube sits on the security bolt flap, and depress the bolt into the cover to ensure that it is not trapped under the first bead.

To remove and fit tubed tyres contd.

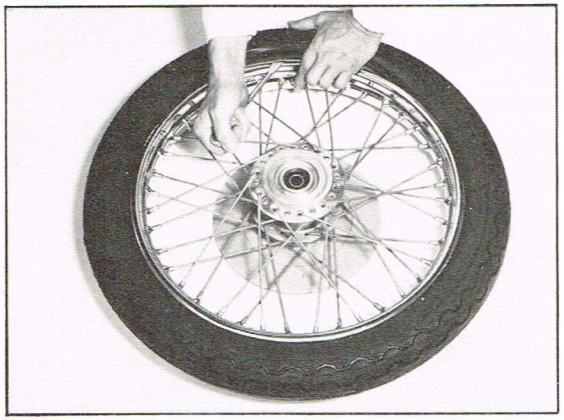


Illustration U *Note: Valve depressed by finger*

4 Complete fitting as before, taking care when pushing over that section of the second bead near the security bolt to push the bolt well into the cover, and to make sure that the tube is resting on the flap of the security bolt. (Illus. U)

5 See that valve and security bolt(s) are 'loose' on rim by depressing into cover.

6 Inflate to approximately 2.1 kg/cm^2 (30 psi.)

7 Deflate and check that valve and bolt(s) are not trapped.

8 Inflate to recommended pressure, check that fitting lines on cover run true with rim, tighten nuts and fit valve cap.

Motorcycle tubes and valves

Avon Motorcycle Tubes are available in the following sizes:-

TUBE	VALVE
16" Rim Diameter	
3.00/3.25-16	Straight threaded valve for WM type rims
5.00 -16	No. 15 rubber car type valve for wellbase rim
5.10H16	" " " " " " " "
17" Rim Diameter	
2.25/2.50-17	Straight threaded valve for WM type rims
2.75/3.00-17	" " " " " "
3.25/3.50-17	" " " " " "
3.10H17	" " " " " "
18" Rim Diameter	
2.50-18	" " " " " "
2.75/3.00-18	" " " " " "
3.25/3.50 -18	" " " " " "
3.10H18	" " " " " "
3.60H/4.10H18	" " " " " "
4.00 -18	" " " " " "
4.25/85H/4.70H18	" " " " " "
19" Rim Diameter	
2.75/3.00 -19	" " " " " "
3.60H19	" " " " " "
3.25/3.50 -19	" " " " " "
4.10H19	" " " " " "
21" Rim Diameter	
2.75/3.00-21	" " " " " "

TUBELESS VALVES HONDA CX500/QUASAR —
Use rubber base car type valves — Schrader 413 or Bridgeport 183M

Tyre/Rim Fitments

RIM SIZE	1.20	1.35	1.5 WMO	1.6 WM1	1.85 WM2	MT2.15 2.15 WM3	MT2.5	MT2.75	MT3.00 3.00D
TYRE SIZE									
	2.25	2.25	2.25	2.25					
		2.50	2.50	2.50					
			2.75	2.75	2.75				
				3.00	3.00	3.00			
				3.10	3.10	3.10			
					3.25	3.25	3.50		
					3.50	3.50	3.60		
					3.60	3.60	4.00	4.00	
						4.00	4.10	4.10	
					4.10	4.10	4.25/85	4.25/85	
						4.25/85	4.70	4.70	4.70
						4.70			5.00
									5.10

Recommended tyre sizes for the rim shown are underlined

Interchangeability of Tyres

Standard (100% height to width ratio) tyres such as the Speedmaster MK.II and S.M. MI.II may be replaced with Roadrunner tyres (90% height to width ratio) provided that load carrying capacity, rim size and preferred physical dimensions are taken into account. Roadrunner tyres may be selected by comparing data shown in this manual, or if in doubt use separate Avon Roadrunner Fitment Guide AT3

N.B. *These possible interchanges are based on rim sizes only, it is important that the tyres selected have at least the load carrying capacity of the tyres replaced and that there is adequate clearance when fitted. Please refer to Load/Pressure and Dimensional Data tables for details.*

LOAD & PRESSURE TABLE

	Everywhere except North America. Partout a l'exception de l'Amerique du Nord. Überalls mit Ausnahme von den Vereinigten Staaten.														North America only. L'Amerique du Nord seulement. Nur die Vereinigten Staaten.					
	Inflation Pressure. Pression de gonflage. Luftdruck.																			
bar≙kg/cm²	1.50		1.75		2.00		2.25		2.50		2.75		3.00							
psi	22		25		29		33		36		40		44		12	16	20	24	28	32
Tyre Size Dim. du pneu Reifengrösse	Tyre load capacity. Capacité aux charges du pneu. Last des Reifeninhalts.																			
	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	lbs	lbs	lbs	lbs	lbs	lbs
2.25S17R					74	163	82	181	90	198	105	231	115	253	140	170	190	210	230	250
2.50S17R					83	183	94	207	105	231	116	256	130	287	160	190	220	250	270	290
2.50S18	62	137	74	163	86	190	98	216	110	242					170	200	230	260	280	310
2.75S18R					104	229	120	265	135	298	151	333	170	375	210	250	280	310	350	370
2.75S19	75	165	91	201	107	236	124	273	140	309					220	260	290	320	350	380
3.00S16	75	165	91	201	107	236	124	273	140	309					220	260	290	330	360	390
3.00S17R					117	258	134	295	150	331	168	370	190	419	230	270	310	340	380	410
3.00S18R					125	276	143	315	160	352	178	392	200	441	240	280	320	360	400	430
3.00S19R					133	293	152	335	170	375	188	414	210	463	250	300	340	380	410	450
3.00S21R					140	309	160	352	180	397	200	441	220	485	280	330	380	420	460	490
3.25S16	100	220	120	265	140	309	160	352	180	397					230	270	310	340	370	400
3.25S17	106	234	127	280	148	326	169	373	190	419					240	280	320	360	390	430
3.25S18	112	247	134	295	156	344	178	392	200	441					250	300	340	380	410	450
3.25S19	122	269	144	317	166	366	188	414	210	463					260	310	350	390	430	470
3.50S18	128	382	151	333	174	384	197	434	220	485					270	320	370	410	450	490
3.50S19	134	295	158	348	182	401	206	454	230	507					280	340	390	430	470	510
4.00S18	170	375	195	430	220	485	245	540	270	595					340	410	470	520	570	610
5.00S16	200	441	230	507	260	573	290	639	320	705					430	500	580	640	700	760
3.50-19	158	345	182	401	206	454	230	507							280	340	390	430	470	510

Notes: 1. 'R' or 'reinf' = Reinforced

2. Speed Limits
   Avon motorcycle tyres in good condition at the correct pressures for the load shown in the above table are suitable for speeds up to the following maxima.

–	95 mph	150 km/h
S	113 mph	180 km/h
H	130 mph	210 km/h

For speeds in excess of 75 mph increase tyre pressures by 8 psi

(This applies to North America only)

LOAD & PRESSURE TABLE contd.

	Everywhere except North America. Partout a l'exception de l'Amerique du Nord. Überalls mit Ausnahme von den Vereinigten Staaten.												North America only. L'Amerique du Nord seulement. Nur die Vereinigten Staaten.					
	Inflation Pressure. Pression de gonflage. Luftdruck.																	
bar≙kg/cm²	1.90		2.10		2.30		2.50		2.70		2.90							
psi	28		30		33		36		39		42		12	16	20	24	28	32
Tyre Size Dim. du pneu Reifengrösse	Tyre load capacity. Capacité aux charges du pneu. Last des Reifeninhalts.																	
	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	lbs	lbs	lbs	lbs	lbs	lbs
3.10H17 80/90H17	95	209	110	242	120	265	135	298	145	320	160	353	210	250	290	320	350	380
3.10H18 80/90H18	100	220	110	242	125	276	140	309	150	331	165	364	230	270	310	340	380	410
3.60H18 90/90H18	115	254	130	287	145	320	165	364	180	397	195	430	280	340	380	430	470	510
3.60H19 90/90H19	120	265	135	298	150	331	170	375	185	408	200	441	300	350	400	450	490	530
4.10H18 100/90H18	145	320	165	364	180	397	200	441	220	485	240	529	360	410	480	540	590	640
4.10H19 100/90H19	150	331	170	375	190	419	210	463	230	507	250	551	370	440	500	560	620	670
4.25/85H18 110/90H18	160	353	185	408	205	452	225	496	250	551	270	595	390	460	520	580	640	690
4.70H18 120/90H18	175	386	200	441	220	485	245	540	270	595	290	639	430	510	580	650	710	760
5.10H16 130/90H16	200	441	224	494	248	547	272	600	296	652	320	705	430	510	590	650	710	770
4.50H17A 130/90H17	226	498	242	533	259	571	275	606	291	641	307	677	460	540	620	690	750	810
5.10H17 130/90H17	226	498	242	533	259	571	275	606	291	641	307	677	460	540	620	690	750	810

Notes: 1. 'R' or 'reinf' = Reinforced

2. Speed Limits
   Avon motorcycle tyres in good condition at the correct pressures for the load shown in the above table are suitable for speeds up to the following maxima.

–	95 mph	150 km/h
S	113 mph	180 km/h
H	130 mph	210 km/h

For speeds in excess of 75 mph increase tyre pressures by 8 psi

(This applies to North America only)

DIMENSIONAL DATA

(At maximum loads and pressures on recommended rims)
(Aux charges et pressions maximum avec les jantes de roue standard)
(Zu Höchstneanspruchung und-drücken der Normfelgen)

SPEEDMASTER Mk.II	Recommended Rim Jante de roue standard Normfelge	Section width Grosseur du galbe Reifenbreite Inches	mm	Outside Diameter Diametre exterieure Aussenseitedurchmesser Inches	mm	Revolutions Tours Drehung Mile	Km	Permissible Alternative Rims Les jantes de roue alternatifs permis Zulässige Abwechselindefelge
2.25S17 Reinf	WM1/1.6	2.2	56	22.0	557	955	593	WMO/1.5 1.35 1.2
2.50S17 Reinf	WM1/1.6	2.5	62	22.4	567	943	585	WMO/1.5 1.35
3.25S17	WM3/2.15	3.4	87	24.1	611	885	550	WM2/1.85 MT2.50
2.50S18	WM1/1.6	2.5	64	23.3	592	903	560	WMO/1.5 1.35
2.75S18 Reinf	WM2/1.85	2.9	73	23.7	602	893	555	WM1/1.6 WMO/1.5
3.00S18 Reinf	WM2/1.85	3.0	77	24.2	615	875	544	WM3/2.15 WM1/1.6
3.25S18	WM3/2.15	3.4	87	25.0	633	855	531	MT2.50 WM2/1.85
3.50S18	WM3/2.15	3.7	93	25.3	643	845	525	MT2.50 WM2/1.85
2.75S19	WM2/1.85	2.8	71	24.7	628	856	532	WM1/1.6 WMO/1.5
3.00S19 Reinf	WM2/1.85	3.0	77	25.1	637	845	525	WM3/2.15 WM1/1.6
3.25S19	WM3/2.15	3.4	87	26.0	661	819	509	MT2.50 WM2/1.85
3.50S19	WM3/2.15	3.7	93	26.3	668	813	505	MT2.50 WM2/1.85
3.00S21 Reinf	WM2/1.85	3.0	77	27.1	688	783	486	WM3/2.15 WM1/1.6

Reinf = Reinforced

DIMENSIONAL DATA

SM MK.II	Recommended Rim Jante de roue standard Normfelge	Section width Grosseur du galbe Reifenbreite Inches	mm	Outside Diameter Diametre exterieure Aussenseitedurchmesser Inches	mm	Revolutions Tours Drehung Mile	Km	Permissible Alternative Rims Les jantes de roue alternatifs permis Zulässige Abwechselindefelge
3.00/3.25S16	WM3/2.15	3.4	87	23.3	592	913	566	MT2.50 WM2/1.85 WM1/1.6
5.00S16	3.00 D	5.1	131	26.4	670	827	514	MT3.0
2.25S17	WM1/1.6	2.3	56	22.0	559	953	592	WMO/1.5 1.35 1.2
2.50S17	WM1/1.6	2.5	62	22.4	569	940	584	WMO/1.5 1.35
3.00S17 Reinf	WM2/1.85	3.0	77	23.6	599	899	559	WM3/2.15 WM1/1.6
3.25S17	WM3/2.15	3.4	87	24.4	620	872	541	MT2.50 WM2/1.85
2.75S18	WM2/1.85	2.9	72	24.2	615	874	543	WM1/1.6 WMO/1.5
3.00S18 Reinf	WM2/1.85	3.0	77	24.7	628	858	533	WM3/2.15 WM1/1.6
3.25S18	WM3/2.15	3.4	87	25.4	645	839	521	MT2.50 WM2/1.85
3.50S18	WM3/2.15	3.7	93	25.9	658	825	512	MT2.50 WM2/1.85
4.00S18	MT2.5	4.3	110	26.6	675	812	505	MT2.75 WM3/2.15
3.25S19	WM3/2.15	3.5	89	26.4	670	807	501	MT2.50 WM2/1.85
3.50S19	WM3/2.15	3.7	93	26.9	683	795	494	MT2.50 WM2/1.85

Reinf = Reinforced

SIDECAR TRIPLE DUTY MK 11	Recommended Rim Jante de roue standard Normfelge	Section width Grosseur du galbe Reifenbreite Inches	mm	Outside Diameter Diametre exterieure Aussenseitedurchmesser Inches	mm	Revolutions Tours Drehung Mile	Km	Permissible Alternative Rims Les jantes de roue alternatifs permis Zulässige Abwechselindefelge
3.50-19	WM3/2.15	3.7	94	26.6	676	803	499	MT2.50 WM2/1.85

DIMENSIONAL DATA

ROADRUNNER	Recommended Rim Jante de roue standard Normfelge	Section width Grosseur du galbe Reifenbreite Inches	mm	Outside Diameter Diametre exterieure Aussenseitedurchmesser Inches	mm	Revolutions Tours Drehung Mile	Km	Permissible Alternative Rims Les jantes de roue alternatifs permis Zulässige Abwechselindefelge
510H16 *130/90H16*	3.00 D	5.2	131	25.3	643	860	534	MT 3.0
310H17 *80/90H17*	WM2/1.85	3.1	79	22.9	582	925	574	WM1/1.6 WM3/2.15 WM0/1.5
5.10H17 *130/90H17*	MT 3.0	5.2	133	26.3	669	826	512	MT2.50 MT2.75
310H18 *80/90H18*	WM2/1.85	3.2	80	24.0	609	884	548	WM1/1.6 WM3/2.15 WM0/1.5
360H18 *90/90H18*	WM3/2.15	3.5	88	24.3	617	875	544	MT2.50 WM2/1.85
410H18 *100/90H18*	MT2.50	4.1	103	25.1	636	854	531	MT2.75 WM3/2.15 WM2/1.85
425/85H18* *110/90H18*	MT2.50	4.4	112	26.1	663	825	512	MT2.75 WM3/2.5
470H18 *120/90H18*	MT2.75	4.7	120	26.4	670	822	511	MT3.00 MT2.50 WM3/2.15
360H19 *90/90H19*	WM3/2.15	3.5	89	25.5	648	835	519	MT2.50 WM2/1.85
410H19* *100/90H19*	MT2.50	4.0	98	26.2	665	816	507	MT2.75 WM3/2.15 WM2/1.85
MUDPLUGGER								
3.00–21	WM2/1.85	2.9	73	27.7	703	•	•	WM3/2.15 WM1/1.6
4.00–18	MT2.50	4.0	102	26.8	681	•	•	WM3/2.15 WM2/1.85

* *Availabie in tubeless or tubed construction.*

• Dependent on pressure and load. Contact Avon Service Division

U.K. Tyre Regulations

Riding on worn or damaged tyres puts the lives of other people at risk as well as your own. It may also be illegal and you may be subject to heavy penalties. Below are the main points from the Tyre Legislation currently in force. It is illegal to use a tyre if:-

1. The tyre does not have at least 1 mm tread pattern depth, excluding any tie-bar, for the full circumference of the tyre and covering at least three-quarters of the tread breadth. The pattern depth requirement does not apply to Mopeds of up to 50 c.c. engine capacity but the tyres on such machines must show a pattern the relief of which is clearly visible around the full circumference of the tyre and throughout at least three-quarters of the tread breadth.
2. The tyre is unsuitable for the use to which the vehicle is put or unsuitable with regard to the types of tyres fitted to the other wheels.
3. The tyre is not correctly inflated for the use to which the vehicle is put.
4. The tyre has a break in its fabric, or a cut more than 25 mm or 10% of the width of the tyre, whichever is the greater, measured in any direction on the outside of the tyre and deep enough to reach the body cords.
5. The tyre has any lump or bulge caused by separation or partial failure of its structure.
6. The tyre has any portion of the ply or cord structure exposed.
7. It is illegal to use a recut pneumatic tyre on a motorcycle.

N.B. The regulations regarding tyres will also be applied when a vehicle is submitted for D.O.E. annual testing and certification.

You are responsible for the condition of your tyres, make sure that you inspect regularly and frequently.

Avon Tyres Limited
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