Rufus Wheels and Tyres:

Introduction:
I am a bit of a dinosaur when it comes to wheels and I am not a lover of aluminium wheels, in fact if steel wheels** were an available option on quality new cars I would go for them every time. Whilst I like the look of spoked wheels, I hate cleaning them; and their fitment, which can involve special hubs and spinners etc. will sometimes increase the weight somewhat over and above the standard wheels, especially when multiplied by five. Not too important on an MGB based car but worth considering if your car is a Cyclecar or Heavy Quad.

Note.
*** Before you scoff at this option just take a look at some of the steel wheels fitted to BMW's towards the end of the last century! and the MGA and Triumph TR6 etc. Personally I wouldn't buy a BMW but they did make nice steel wheels.*

MGB's tend to have wire wheels or steel wheels (generally referred to as 'Rostyle' wheels if memory serves me correctly). Many of the V8 engined cars have aluminium wheels; there is a good reason for this which is that wire wheels cannot cope adequately with the larger power outputs. This is why the more powerful Morgan's have aluminium wheels.

Emma, my TD, has MGA pierced hole steel wheels and Rufus originally had wire wheels. Emma's wheels are painted cream and are a bit untidy looking. Rufus had silver painted wire wheels which were in quite good condition but would nevertheless need refreshing during any total restoration.

Emma's steel MGA wheels.

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My choice of wheels:
I was spoilt for choice when it came to the wheels as when I sold Muffin my first TA the purchaser didn't want, or need, the black painted wire wheels that were fitted to the car. As purchased Rufus the second TA had silver painted wire wheels that were in sound condition.

Rufus's original wire wheels.

Additional to this I had purchased a set of MGA steel wheels from NG Cars, the same type as fitted to Emma the TD and I really like them. Personally I feel that while these wheels would look good on the TC, TD and TF models I am less convinced that they would be aesthetically suitable for the TA model. After much deliberation I decided to use the MGA steel wheels anyway.

One of the five wheels (purchased from NG Cars) destined for Rufus.

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Conversion to steel wheels:
Swapping from wire wheels to steel wheels (or vici-verci) on an MGB based kit car is relatively easy and you simply replace the hubs and wheels with the alternative, however there is a slight problem as the rear axle on a wire wheeled car is slightly narrower and if you fit steel wheels onto a wire wheeled axle you end

up with a track reduction of approximately 1-1/2". This was not a problem as I have a spare axle of the correct type (I've also got three spare MGB overdrive gearboxes but that's another story!).

Note.
*** An MGB has 14" wheels and an MGA has 15" wheels so I will end up with slightly higher gearing which will better suit the lighter weight of the TA. The downside is that I will have to have the speedo recalibrated.*

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Wheel restoration:
The overhaul of steel wheels can be done at home using wire brush wheels and abrasive mops in an angle grinder or electric drill, but it's a lot of hard work. Alternatives are blasting and powder coating or blasting and painting. Personally I'm not a lover of powder coating and would normally choose a painted option for chassis parts but I think that it's a good option for steel wheels.

I will have the MGA steel wheels professionally refurbished which includes, removing the tyres, bead blasting and spraying in RAL 9001 Cream. The tyres will then be replaced and the wheels balanced.

Note.
*The overhaul of wire wheels is really a job for the professionals. For around £70-£100 (each wheel) they will align the rim and tension the spokes then sandblast and paint them.** The professional restorers I have spoken to, at various trade shows, have said that this is their preferred method and is much better than re-spoking a newly painted rim.*

If you intend to fit stainless spokes then the wheel rims will need to be dealt with (painted, chromed or powder coated) before fitting the new spokes.

To summarise; whilst I might be tempted to refurbish steel wheels myself doing the same thing to five wire wheels would drive me insane.

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Tyres:
Rufus has ended up with 15" wheels so he obviously has 15" tyres; 15 inches is the measurement between the beads of the tyre which is less than the visible diameter of the wheel rim. For example the MGA wheels are 15", but the measurement across the wheel rims is just over 16".

The size of Rufus's tyres is ***'165/80 R15'***, which is embossed on the sidewalls. The first number gives the tread width of the tyre ('165'mm). The '80' after the slash sign indicates the percentage ratio between the tyre's height and tread width (so in this case 80% of 165mm = 132mm). The 'R' indicates a 'Radial' tyre and the '15' is the diameter of the wheel rim** in inches.

Note.
*** Remember the diameter is not measured across the complete rim, it is measured from the point where the tyre bead sits on the rim.*

Additional to the above most tyres have a ***'Load Index Rating'*** and a ***'Speed Rating'*** Rufus's tyres are marked ***'87T'***. **87** is the Load Rating which is ***545 kg*** per tyre. ***T*** is the speed rating which is ***118mph***.

Initially I will set the front tyre pressures at 23psi (pounds per square inch), and the rears at 25psi with the spare set to 30psi. It should be noted that if you fit the spare the pressure should be reduced accordingly, you therefore need a tyre pressure gauge in your onboard toolkit.

If buying new tyres the first thing to decide is do you want radial or cross plies? Going the cross-ply route means you often have a choice of slightly larger diameter tyres, which gives the same effect as a slightly increased gear ratio.

Notes.
Historically Michelin Radial Tyres were originally invented for the Citroen 2CV and no doubt many owners would sensibly argue that radial tyres suit the general characteristics of modern cars better than cross ply tyres.

In the mid 1960's my two brothers both bought a brand-new Ford Anglia 105E which had cross ply tyres as standard. At the first tyre change one brother fitted the same tyres as original; the other one spent a bit more money and fitted Michelin X radials. When home on leave I drove both cars and the difference was remarkable, the radials being not only very much quieter but they also considerably improved the general road holding. Modern day cars have improved suspension and handle much better than a Ford Anglia, apart from the noise the average driver probably wouldn't notice much difference between driving a car with cross ply tyres as opposed to radials.

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Coloured dots on tyres:
Yellow dots: - Are used by most tyre manufactures to indicate the lightest point on the periphery of the tyre. As the valve stem is normally heavier than the metal removed from the hole it sits in the tyre fitter should align the Yellow dot with the tyre valve.

Red dots: - Indicate the highest point on the tyre as tyres are never perfectly round. Some wheels have a dot or other marking to indicate their lowest point as the wheels are also not perfectly round. If your wheels and tyres are so marked then the Red dot should be aligned with the mark on the wheel rim.

Yellow <u>and</u> Red dots: - Where both Yellow and Red dots are marked on the tyre the Red dot always takes precedence. If the wheel is marked to indicate its low spot the tyre fitter should align the Red with the mark on the wheel and the Yellow dot should be ignored. If the wheel is not marked with its low spot the Yellow dot takes priority and is aligned with the tyre valve.

Wheel balancing – When the dots are correctly aligned the least number of balance weights will be required.

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Long term storage:
If you are not going to use your car for a while you need to take precautions in respect of the tyres. I have bought cars that have stood for a long time with flat tyres that have become permanently deformed and there is no way you can balance them. The purchase of new tyres is the only option so don't be encouraged to pay extra for an abandoned kit car that is sitting on new looking tyres (The seller may have only recently inflated them following years of neglect).

There are three main methods of tyre care when storing cars. For short term storage I would increase the tyre pressures and move the car occasionally. For long term storage I would put the car on blocks or fit slave wheels and tyres.

UV light (sunlight) is not good for tyres and you should take precautions to make sure that they are not excessively exposed; but let's be honest (or perhaps realistic would be a better word) even if a car is left outside it will spend up to half its life in the dark, of the remaining time the tyres will take turns to hide in the shadows. Personally I like a carport but, and again let's be honest, my sub £10k cars sit under the carport and my £40k plus SUV and campervan both sit out in the sunshine, mind you the tyres won't last 10 years so I shall not fret about it.

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Age of tyres:
Tyres are marked with a date of manufacture and the general recommendation is that tyres should be changed after 10 years. On certain vehicles: e.g. buses, coaches and lorries this is a legal requirement. As for cars there is no legal requirement to change them at ten years of age, although they will fail an MOT if the tread pattern is sufficiently worn or the side wall is excessively cracked.

Rufus's tyres are marked **'DOT 2920'.** The last four digits indicate the age; i.e. ***29*** = it was made in the 29th week of the year and ***20*** = it was made in 2020.

Our problem is that most of us will not wear the tyres out in ten years so should we change them? Personally (and I'll probably get some flack for saying this) I wouldn't bother on something like Rufus that will be used for gently poodling around the countryside, on the other hand my sports motorbikes were a different matter as are/is any kit car that you intend to drive with any amount of gusto.

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Misc. tyre markings:
There are many other marks that can be found on tyres; e.g. 'Outside' - 'Direction of Rotation' (commonly found on motorbike tyres) - 'Maximum Tyre pressure'** - 'Radial' - 'Cross Ply' - 'Tubeless' and the 'Makers Name' etc.

Note.
It is worth checking the maximum tyre pressures before over inflating your tyres for winter storage.

Summary:
Whether you fit wire, steel or aluminium wheels is purely down to personal choice. As you will have gathered my choice is steel wheels for the following reasons, which of course is purely my personal opinion (so don't get paranoid if you have wire wheels!).

1. I prefer the look of them.
2. Inner tubes are not generally required.
3. They are generally cheaper to buy new.
4. Their refurbishment is generally cheaper than wire and aluminium wheels.
5. They are less prone to damage.
6. They don't deteriorate as quickly as wire or aluminium wheels.
7. They are easier to keep clean.
8. It is a lot easier to work on cars with steel (or aluminium) wheels than those fitted with wire wheels; e.g. just try removing the split pin from a wire wheel hub after it has be inserted by a previous ham fisted owner.
9. Tightening them on the hubs is not a guessing game with a copper mallet. The photo below shows the wheel spinner that was fitted to the left hand front wheel of Rufus when purchased.

The left hand front wheel spinner, note the split.

Note.
So far the only nuts and bolts that I have not found to be excessively tight are, believe it or not, all four hub nuts.

The right hand rear spinner was so tight it's a wonder I didn't split it when hammering it to get it off. Fearing for its safety after the first few hefty clouts didn't work I poured a kettle of boiling water over it

Of course the downside to fitting steel wheels is that I will have to buy some nice shiny hubcaps, an alternative is that I could try and source some aluminium centres that will fit in the hubs, however this would also require the purchase of some fancy wheel nuts; you just can't win!