Dear Members,

My thanks this month go to Andy Ranson who contributed the following articles:

A story of how he overcame performance problems with his Austin 10/4, and queries of the month, reproduced with the kind permission of the Austin Ten Drivers Club (ATDC).

Finally, please see the attached 'Not quite yet in another Lock Down Quiz' which is all about locations in Greater London.

QUERIES OF THE MONTH

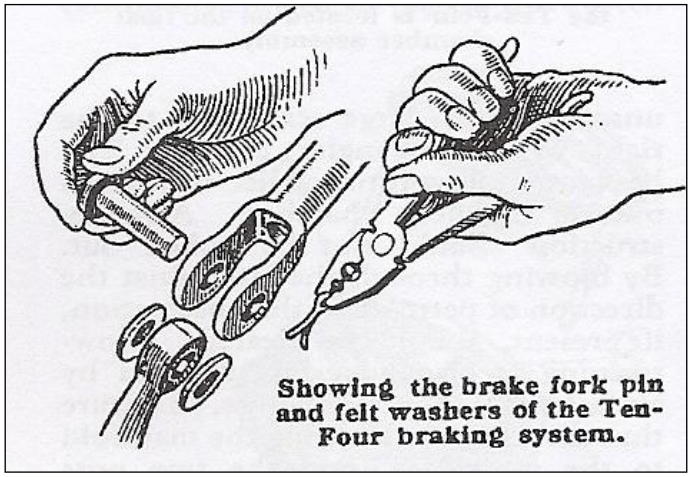
Some more "Queries of the Month", these originally appeared in "The Austin Magazine & Advocate" during the 1930s and 1940s. This month's selection consists of No 583 Brake Adjustment – Austin Ten-Four and No 636 Wheel Distortion Austin Light Twelve-Four.

No 583 appeared in May 1934 and No 712 in January 1935.

No 583 – Brake Adjustment - Austin Ten-Four

Q. *Recently, in adjusting the brakes on my Austin Ten-Four by turning the rod connecting the pedal lever with the cross-tube, I found it necessary to screw the entire thread on this rod into the slotted end member, so that, although the brakes have been taken up sufficiently for the time being, further adjustment when necessary (as it will in due course) does not seem possible. I shall be grateful for your advice as to what can be done.*

A. You can restore the range of adjustment by shortening the brake rods which connect to the main cross-tube at each end. After slackening the main adjustment to which you refer, disconnect each rod from its cross-tube lever by withdrawing the split pin and the joint pin. Then, after slackening the lock-nut, each fork end can be screwed further on its rod to reduce the effective length.



Showing the brake fork pin and felt washers of the Ten-Four braking system.

Remember, however, to count the number of turns so that the same adjustment is made in each instance, or otherwise the balance of the braking will be disturbed. Up to four complete turns should be sufficient to restore the range of the main adjustment. After adjusting each rod tighten home the locknut. The joint pin should have its two felt washers fitted as hitherto and be secured by the split pin. Then the main adjustment can be taken up to give suitable braking response to the pedal movement. In all likelihood it will also be necessary to reset the handbrake lever by the adjusting screw near its base.

No 636 – Wheel Distortion – Austin Light Twelve-Four

Q. *Recently, on jacking-up the nearside of the front axle of my Austin Light Twelve-Four for the purpose of greasing the swivel axle, I casually spun the wheel and noticed that it was out of truth by, I should judge, about 3/8 inch. Will this have any harmful effect if not rectified, and if rectification is necessary, is it possible for me to true up the wheel.*

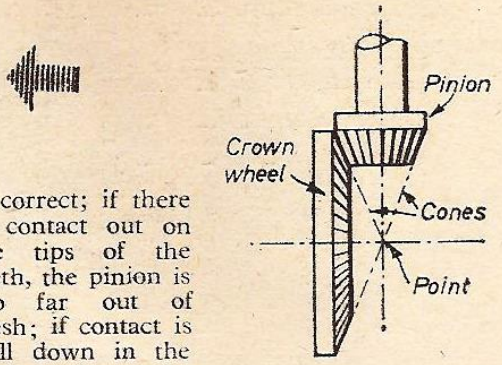
A. It is quite possible for the tyre to be up to ½ inch out of truth if it is not fitted properly on the rim, and we are inclined to think that this is cause of the apparent wheel distortion in your case. You can readily verify if the tyre is at fault in this way by examining the fine moulded line on the tyre wall, which should be just outside and concentric with the periphery of the rim. If this line appears out of place, deflate the tyre until it is fairly soft and punch it into its correct position. It is, of course, possible that the wheel is out of truth, although this is only likely to arise if it has received a glancing blow while running. Therefore, if examination seems to point to the wheel itself being at fault, you should consult your local Austin dealer with a view to having the trouble remedied, as prolonged usage under these conditions might result in premature tyre wear.

AUSTIN SEVEN REAR AXLE

I RECENTLY fitted a new crown wheel and pinion to my Austin Seven Ruby saloon. Since this, the drive and overdrive has been very noisy. I have tried removing shims and altering the axle shaft adjusters from time to time, but without improvement. Do you consider that the crown wheel is too close in mesh with the pinion or perhaps not close enough?—N. Wilkins (Tockington).

A bevel pinion and crown wheel may be considered as parts of cones at the pitch line of the teeth, and these cones should meet at a point where the axes of the shafts cross. There is some running clearance or backlash on the teeth. While these imaginary cones are fitting together properly, the gears are correctly engaged, and the axle should be reasonably silent on both drive and over-run. However, if the axle is not correctly meshed, the cones will be displaced and there will be noise both on drive and over-run; there may still be backlash.

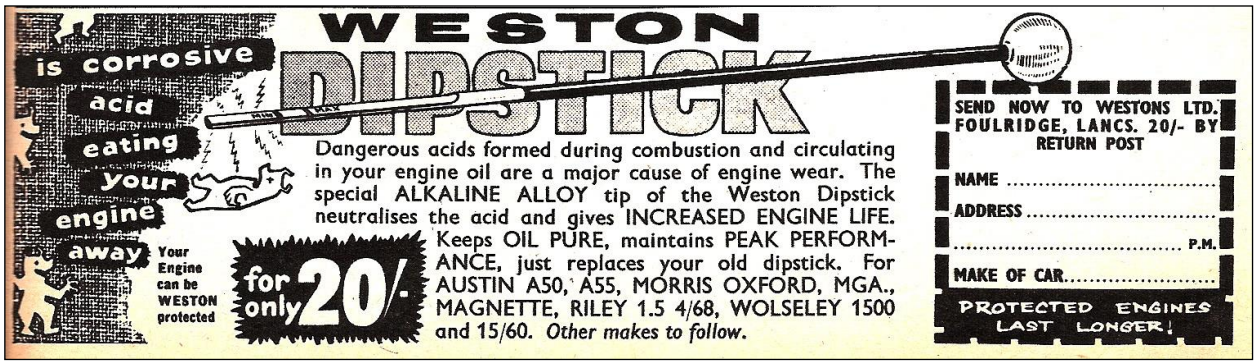
If you consider circumstances in conjunction with our illustration, it will be seen that the pinion shaft could be set so the point of the cone is either in front or behind the axis of the crown wheel—and in each case the crown wheel could be adjusted sideways to give the correct backlash. In the case of the Austin axle, the pinion shaft is set by means of a gauge in the casing and using shims at the torque tube flange; then it is only a question of adjusting the crown wheel sideways for backlash. When there is no gauge to hand, the axle has to be assembled experimentally; one way is to smear some of the crown wheel teeth with red lead and oil or marking blue, then assemble and turn the crown wheel through the shafts. Taken down, the teeth should show broad central markings if the meshing



is correct; if there is contact out on the tips of the teeth, the pinion is too far out of mesh; if contact is well down in the teeth, then the pinion is too far in mesh. If the markings are on one side at one end and on the other side at the other end, then the pinion has to be moved and the crown wheel adjusted to suit. In your circumstances, we suggest you try various combinations of shims, inserting and removing some, and adjusting the crown wheel by means of the threaded rings either side.

Some advertisements from motoring magazines of the 1950s and early 1960s

I'm not sure how much research and trials went into Westons Ltd claim of acid reduction. I wonder how the average motorist would have known if it had worked or not!

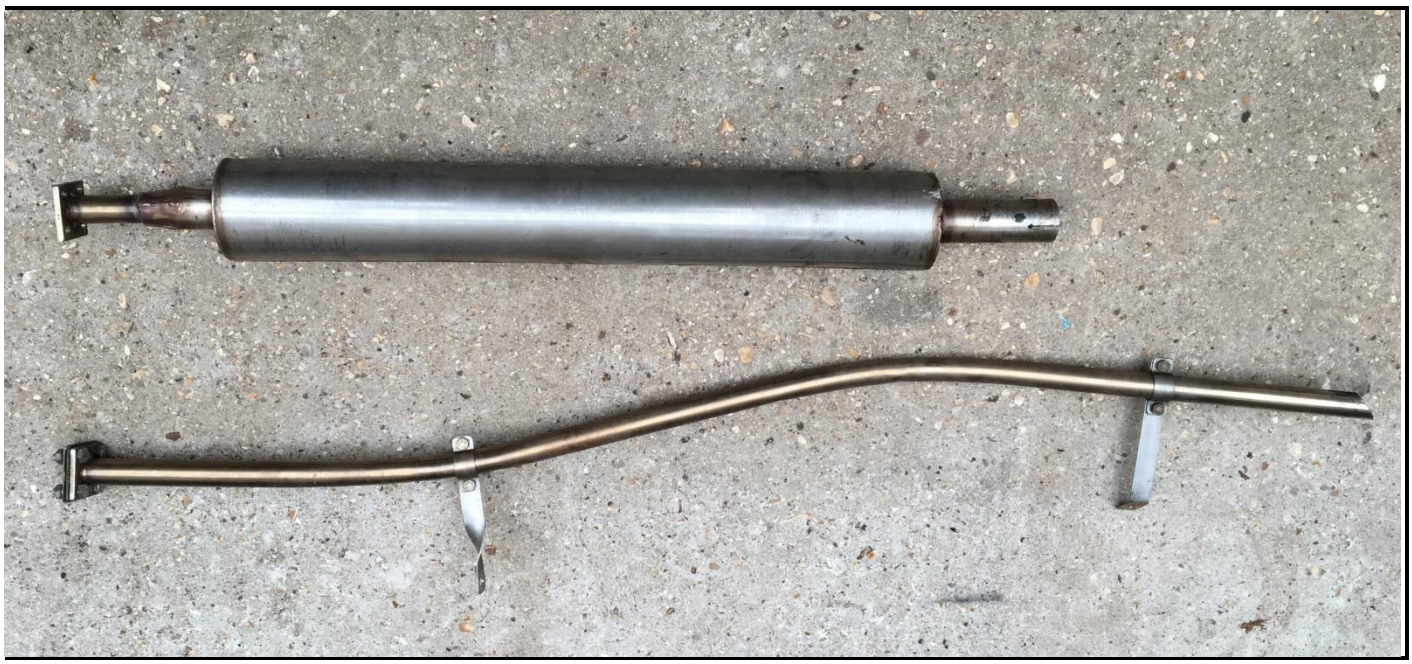


AN EXHAUSTING TIME

A while ago I purchased a 1993 Austin10/4 Chrome Rad from Dave Butcher, I had admired this car for years and it is in superb condition, so was really pleased to finally own it. It was restored by his Dad and the attention to detail had been first class.

However, although it drove OK, performance, at the time, was not up to our other two 1933 Austin 10/4 Chrome Rads. Initially it seemed to lack power climbing hills and back firing on the over-run coming down them. We have a lot of hills down here in Dorset so an investigation was needed. Over the months I adjusted the ignition back and forth, stripped the carburettor, tried different jet sizes and even used super unleaded fuel. Performance slowly improved but not completely.

Well the only item I had not looked at was the exhaust system, but I had my suspicions. The tail pipe appeared to be of a smaller diameter than normal. The exhaust system, like everything else on the car, was very well engineered and manufactured by Dave's Dad. It was all stainless steel with flanged joints with stainless steel hangers (it would put a Rolls Royce to shame!).

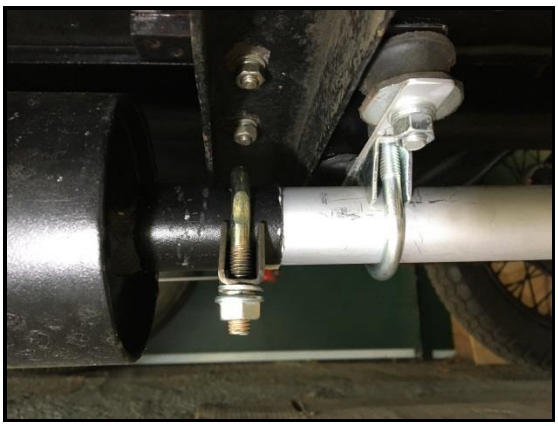


A couple of months ago I mentioned the lack of performance to Tony Westall, after describing to him my efforts he laughed and said you have a “Pea Shooter” exhaust tail pipe, it’s too small, that’s your problem. So theory confirmed.

Well, Do and I were due a visit from Trevor and Jean Edwards and the plan was, due to Covid 19 restrictions, that we would use two Austin 10/4, one each, for our trips out. So not wanting to be Tail End Charlie on our planned runs I decided to sort out the exhaust system. The existing stainless steel tail pipe has an internal diameter of 7/8”. I had a rummage in the workshop and found an old Morris Minor tail pipe with an internal diameter of 1 ¼”, although a different shape, with some cutting and welding a similar shaped tail pipe was produced. However, due to the flange joints on the stainless system, the existing silencer could not be used. Further rummaging found an old Austin 10 silencer complete with a large rusty hole; this was patched with a baked bean tin and a couple of Jubilee clips. Existing stainless steel system removed from the front pipe back. Then using some temporary hangers the bodged system was fitted. A road test revealed an increase in performance and lack of back firing on the over-run.

So during Trevor and Jean’s stay we covered many miles in both Austins and the bodged exhaust system performed well and did not fall off. Trevor and I tinkered with the carburettor and improved the mixture resulting in even smoother running (you can never keep an Austin 10 driver from getting under the bonnet !).

With these improvements a new silencer and tail pipe (1 ¼” diameter) were duly ordered from the ATDC spares department. As part of the fitting I decided to modify all the exhaust hangers. The original design for the1933 Austin 10 results in the exhaust system being fixed directly to the chassis with no flexible damping whatsoever. So I manufactured new hangers and mounts using rubber resilient mounts in all positions. Below are two of the mounts.



After fitting the exhaust system, a few tweaks were needed to the ignition settings and the carburettor mixture and the engine was running smoothly. A quick test drive proved so enjoyable that it lasted over 2 hours and covered 42 miles all around the Dorset countryside. The car has been transformed; it is quieter, runs smoother, climbs hills easier and no longer back fires on the over run.

I admit, I was reluctant to replace such a well-engineered stainless item for a mild steel one, and it wasn't cheap either, but it was worth every penny. So, if your Austin 10 backfires going down steep hills, scaring old ladies, dogs and cyclists, check your tail pipe!

How to Avoid Flat Spots on Tyres

If laying your car up for a period of more than a couple of weeks, it will be beneficial to over-inflate the tyres by about 10psi, providing this doesn't exceed the maximum pressure marked on the sidewall. Keep them topped-up and periodically jack and rotate each wheel to ensure it doesn't sit too long on one spot.

Alternatively, you could elevate the car on axle stands – but this may have a negative effect on suspension bushes, which don't like to be held outside their normal range of movement for too long. The best solution, though, is to get a set of old wheels and tyres and fit them over the winter. Stack the good wheels and tyres horizontally and keep them out of direct sunlight.

Stay safe
NHAEG Committee