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Austin Times

A NEWSLETTER FOR ENTHUSIASTS OF AUSTIN PRE-1955

IN THIS ISSUE

We complete our assessment of the Austin coach and include some impressions of what it was like to own and operate.

Ask Arnold gets off to a flying start with a corker of a question from a troubled owner.

And we take a look round the events to see what's been going on and what's coming up.

NEXT TIME

Revelations of the water babes and belles or...more on marines.

Much more from Arnold

And something to delight any ex-Austin apprentices among our readers

**PLUS MUCH,
MUCH MORE FOR
AUSTIN FANS
EVERYWHERE**

Why an Ascot *avant* the attraction?



Back-to-back classic car road tests have become the vogue among motor-ing journalists in recent years and some of us may have been subjected to such spurious contortions as a comparison between the Austin Seven and Morris Eight.

Never a publication to follow fashion, *Austin Times* would like to attempt something a little different and wonders whether you have ever considered the pre-war Citroën

Editor, Martyn Nutland, is a lifelong devotee of the Austin Light Twelve Four and has owned the model, but he could not resist the temptation, 70 years on from the launch of Citroën's iconic `Traction`, to compare the two genres

Traction Avant alongside the contemporary Austin Light Twelve Four Ascot.

Not a so called back-to-back analysis; the Austin is so hopelessly outclassed mechanically for that to be valid. But to go to the



heart of why the dear old Twelve was such a prim, prissy, shrinking violet of a country town cousin when the Citroëns were so extrovert, elegant and eclectic.

Chalk and cheese - 1935 Ascot to the left, in this case sprightly 12/6 version, in company with 1938 7C

The birth dates of our two subjects are roughly the same. The cowled radiator Ascot was launched in August 1934 although Austin had been offering the same engine in a number of Light Twelves since autumn 1932. The major dealers saw the wraps come off the Citroën 7A on March 24, 1934, the press show came a month later and the very first sale followed on May 3.

On the surface the two cars are similar. Both used in line, vertical, four cylinder, water cooled engines. From Longbridge, a 1,535 cc (69.35 x 101.6 mm) unit, and from the new Javel works, sprawling in the shadow of the Eifel Tower, one of 1,303 cc (72 x 80mm).

OLD FASHIONED

However, this was found to be inadequate, and just a month into its life the 7A's engine was bored out to 78mm (1,529 cc) making it the 7B. (A 1,628 cc 7C and a 1,911 cc 7S in the next French taxation category of 11CV were also available.)

To continue the comparison, both cars had manual gearboxes, drum brakes, and could carry four people in comfort, or five in thigh-squeezing intimacy.

But there the similarity most definitely ends. The Citroën's four cylinder engine had pushrod operated overhead valves whereas the Austin relied on an old-fashioned, performance restricting, side valve layout. Much more important in this respect, the 7B's almost 'square' cylinder dimensions (78 x 80mm) were at the forefront of efficient engine design. Whereas the Light Twelve's long stroke

characteristic, tailored to the stultifying RAC formula for calculating horsepower tax, debilitated this and many other British engines. Even so the Austin managed about 33 bhp at 3,600 rpm as opposed to the Citroën's 35 at about the same revolutions.

Both engines were rubber mounted, but the French car employed a sophisticated system of synthetic cones and blocks devised jointly by two French engineers named Pierre Lemaire and Paul d'Aubarède. This concept of the 'floating motor' absorbed both the torque reactions of the engine and shocks transmitted from the road. There is no evidence that the Ascot's system lacked effectiveness it just looks less scientific.

The engine room was only the beginning of the Citroën's claim to 'cutting edge' technology. The gearbox was to have been an automatic device which reflected André Citroën's personal dislike of driving and approval of anything which made control of a vehicle easier.

Rather oddly, the company turned to Dimitri Sensaud de Levaud for a design. Sensaud de Levaud was a Brazilian coffee magnate who, quite simply, liked inventing things. This idea relied on oil driven turbines in the transmission line whereby resistance from the road wheels on one side was overcome by the engine on the other.

The result should have been an 'infinitely variable' and completely smooth transmission.

PROVED DISASTROUS

The prestige French make Voisin had used such a system in the mid-20s and it worked well in experiments on conventional Citroëns in the early 30s. However, it proved disastrous coupled to front wheel drive. As a result the 7B received a three speed manual gearbox housed in the casing intended for the automatic, and hung in front of the engine in the manner of American Cords and the British FWD Alvis. This location resulted in



Elegance personified - the timeless loveliness of Bertoni's lines for the Traction, here on a 1934 7A. This was the very first rendition at 1300 cc.

the classic traction avant feature of a gear lever protruding from the instrument panel.

The drive shafts were united to wheels and gearbox by Tracta constant velocity joints, as used by early Land Rovers, where they also proved troublesome.

The Austin, of course, could rival none of this. However, it could boast a four speed gearbox and by 1934 had synchromesh on second gear as well as third and top, although André Citroën may still have found the manipulation a little tricky.

It was iconic. As French as Maigret and the Can-Can, Camembert and Vouvray. One of the great automotive shapes. A car which looked, and was, years ahead of its time.

Drive was at the rear wheels, conveyed by conventional transmission shaft and needle roller bearings to a spiral bevel, threequarter floating, rear axle.

The Citroën had independent suspension to all four wheels provided by torsion bars. Initially it used large transverse friction shock absorbers, but by April 1935 sported a telescopic hydraulic type. Originally the cars steered from a worm and sector gearbox but by 1936 they had a much more appropriate rack and pinion. Braking was on

drums all round operated by Lockheed hydraulics supplied from a reservoir mounted on the left-side bulkhead.

The Ascot is in the stone age by comparison, with semi-elliptic 'cart' springs at each corner and, in 1934, friction shock absorbers, although piston type hydraulics arrived before the War. Brakes were a rod and cable operated drum system.

'TALENT SPOTTED'

This became an all-rod Girling wedge and roller layout on later models, which although about as good as mechanical systems get, is not a patch on hydraulic operation.

Both the exterior and interior styling of the 7 Series was handled by the Italian sculptor Flaminio Bertoni. Bertoni's talent for bridging the divide between art and science has been likened to that of Michelangelo. Born in Varese in 1903 he spent part of his early life working for the Macchi firm of vehicle body makers. By the time he was 'talent spotted' by a delegation of French visitors, Bertoni had developed a life long passion for cars.

PLASTICINE

He subsequently moved to France and was hired as a draughtsman by Citroën in 1932.

When he was asked to craft the 7A he had never designed a car in his life but reputedly formed its classic shape from a block of plasticine in a single evening. He went on to style both the 2CV and DS19 and as a consequence now stands



Not Burzi's best. The Italian was capable of a softer line than the 'Al Capone' severity of the Lichfield.

among the immortals.

The interpretation of Bertoni's design was a sturdy monocoque. Construction began with a rigid platform integral with the bulkhead and substantial forward projecting 'pontoons' to encase and support the engine. It was basically similar to the structure subsequently used for the chassisless Austin Eight and Ten.

Onto the platform workers beside the 10 kilometres of Javel conveyors arc-welded the two sides of the car before finally cross-bracing the box with the front and rear lateral panels.

The shells were sprayed in another part of the 240 acre works using a nitro-cellulose paint. As a matter of interest this finish had been developed

Touch of class. The typical look of quality embodied in the detailing of all 30s Austins.



after the 1914-18 war to consume surplus stocks of chemicals!

As time passed, stretching the Traction Avant to make it accommodate first six, then nine passengers, or everything from two 250 kilogram barrels of wine, through six full grown sheep to a prone adult on a stretcher, plus increasing the frontal overhang in 1937 to fit a six cylinder engine and adding a humpy, barnacle of a boot in 1953, ruined Bertoni's original lines. Yet at the outset the car was not simply low, sleek, and sensuously proportioned, it was iconic. As French as Maigret and the Can-Can, Camembert and Vouvray; one of the great automotive shapes. A car which looked, and was, years ahead of its time.

The Ascot, by comparison, was years behind the times.

The body was bolted to a girder chassis frame. To be fair, by now this was cruciformed braced, which was the right way to go, but hardly rocket science.

The styling was by Austin's own talented Italian, Ricardo Burzi. Burzi had worked for Lancia in the early 20s but through an act of incredible imprudence, in that he used his drawing skills to caricature Mussolini for a newspaper, had to flee his homeland.

Recommended to Austin and installed at Longbridge he designed some lovely vehicles for the company. The 1934 Lichfield (10 hp) series, which

included the Light Twelve Four Ascot, with its vaguely Al Capone-Cadillac looks, was not among them.

But, and again to be fair, Burzi was very well aware of Herbert Austin's conservatism and he took the bold step in 1936 of completely restyling the 12 while Austin was on holiday. The New Ascot, as it became known, is a beautifully balanced concept, with elegant flowing wings and tail which looks 'right' from any angle.

Intriguingly, there is a parallel



Who said Austins couldn't look as lovely as their Continental cousins - haute couture by Salmons for a New Ascot.

to the story of Bertoni having styled the 7A in a Parisien evening. Free from Austin's over-the-shoulder gaze, it took Burzi no more than a fortnight to create the New Ascot. When, the recently enobled Lord Austin returned from vacation and told his designer the 12 should be revamped, a full scale colour drawing was available within a few hours! *Touché*.

The Citroën suffered severe birth pangs. This was due in large measure to an unseemly rush to get into production motivated by the company's parlous financial state, André Citroën's impetuosity and his

pride.

The latter had been hurt by a suggestion from arch-rival Louis Renault that car manufacture should be left to the Billancourt company while Automobiles Citroën devoted its time to marketing the output.

Stung into action, between the late spring and early summer of 1933 Citroën had much of his Javel works demolished and a new factory created for a new world-beating project.

Round-the-clock working crammed a 36 month undertaking into a sixth of that time and provided 120,000 square metres of workshop space to house 15,000 machines - as many as Billancourt - and the 18,000 workers needed to operate them.

On October 9, the

new facility was opened with a banquet

in the 250-metre-long production hall for 6,500 of Citroën's friends, 180 French celebrities, 3,600 agents and 1,500 selected employees. But if the money was there for the champagne and special petite rosalie ice cream, it was not available to run the works.

As early as 1930 Citroën's debt stood at 125 million francs and in this fall of '33 they were soaring by the day. Just over a month after the banquet the Receivers were in, and 13 months later, in December 1935, Michelin acquired Automobiles Citroën.

The scramble for production meant the prototype 7s were



The Traction is one of the few popular cars that are genuinely usable today. The example on the right belongs to Walter and Noëlla Callens from Belgium

on the road with, locking brakes, torsion bars which broke on rebound, a *moteur flottant* which did so to such an extent it fractured the exhaust and caused the radiator header tank to hit the bonnet, plus diverse electrical problems. The automatic gearbox may have been, as described at the works, 'only fit for frying chips', but the replacement manual 'box suffered third gear jamming in the selector mechanism.

RESOLVED

And things were as bad on Bertoni's stylish body. The doors were difficult to open and close and flew open on the move while the welds broke away.

To the credit of Javel's technicians most of these problems were resolved in time for a company-organised concours d'elegance in Paris's Bois de Boulogne on June 8 1934.

The event illustrated André Citroën's flair for publicity. On this occasion seven meticulously prepared Traction Avants - four saloons in red, white and blue, two cabriolets

and a *faux* cabriolet (fixed head coupé) were handed over to a bevy of society beauties including Baroness de Rothschild.

All went well until the cars were due to parade from the prize-giving whereupon the locking brake malaise returned. Mechanics scabbled to release the shoes while, to save the day, Monsieur Citroën performed the French equivalent of an invitation to 'talk amongst yourselves'!

None of this would have done at 'The Austin', of course. Boring, unsophisticated and undistinguished though the Ascot's may have been, the middle class family who

invested around £200 of their bank balance were guaranteed a reliable, quality car.

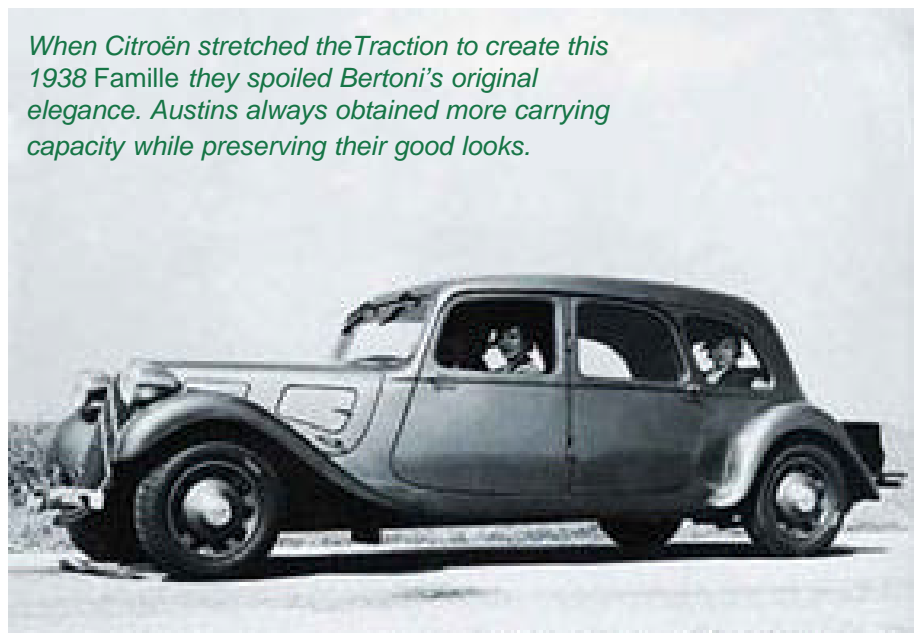
The phrase, 'triumph of workmanship over design' has been unkindly applied to the Rolls-Royce. It could more appropriately be used for the Austin Light Twelve Four.

The materials Longbridge used, the construction methods they employed and the level of quality control were of the highest. The Ascots' finish, detailing and appointments would all have reflected this - the clock, adjustable footrests for the rear seat passengers, roller blinds for the rear screen and quarter windows, and a comprehensive tool kit including a spare cylinder head gasket.

SKILFULLY DONE

Whereas the traction Avant could be decidedly stark. It carried the same instrumentation as the Austin but the layout was utilitarian and although the Ascot's dashboard was also of steel, no attempt was made at 'wood-graining' as was so skilfully done at Longbridge.

When Citroën stretched the Traction to create this 1938 Famille they spoiled Bertoni's original elegance. Austins always obtained more carrying capacity while preserving their good looks.



The Traction Avant's upholstery was unlikely to have been to English tastes. A variety of materials such as wool and velours were used in different styles - plain, pleated, a combination of both or buttoned. The frames were often works-bus-tubular-steel; headlinings usually in the same fabric and colour as the seats with rubber mats to the front of the car and woollen to the rear. But there was little of the craftsmanship you would enjoy in an Austin. In service, the Ascot would have been untemperamental, easy to drive, safe, solid and comfortable with a top speed around 60 mph.

By the early 1930s he had come to resent being regarded as the 'French Henry Ford'

By contrast the 7B would have been sensational. No faster but incredibly safe, stable and with exceptional cornering and road holding capabilities even under adverse conditions.

Despite all its early tribulations the Traction Avant is regarded as a masterpiece which set the trend in motor car design for decades.

Clearly the Citroën is 'light years' ahead of the Austin Twelve with which we have sought to make comparison. Yet the question remains, why should this be so.

It is easy to respond with the argument that André Citroën was a more innovative and accomplished designer than

Lord Austin. And certainly their characters were very different.

The Frenchman was charismatic, a *bon viveur*, an aesthete, someone who, rather than automotive technicians, enjoyed the company of artists, entertainers and intellectuals, numbering among his circle the young Menuhin, and Charlie Chaplin.

HAGIOGRAPHY

He was also a gambler and adored time spent in the sparkling casinos of Deauville and Le Touquet.

Yet to dismiss André Citroën, as some have, as a man more concerned with the fall of the dice and the turn of a pretty ankle, than running a motor business, is to do him the gravest injustice.

Citroën was a graduate of Paris's Ecole Polytechnique, the most distinguished technical academy in France. As early as 1902 he established a business manufacturing mechanically advanced double helical gears - the origins of the double chevron - and by 1908 was involved in the motor industry through an association with the French manufacturer Mors.

POPULIST

Although Citroën had a regard for Ford bordering on hagiography, by the early 1930s he had come to resent being regarded as the 'French Henry Ford', seeing himself more in the ilk of a populist Ettore Bugatti. Partly for this reason, and also because of his financial difficulties, he determined to give his customers a car so distinctive and technically

advanced that it would place him years ahead of the competition.



We conclude our comparison of the Austin and Citroën in the next issue

On guard for Swiss 'Brit'

It's that time of year again. Many of us are rolling out our cars after hibernation, some light fettling or even a major restoration.

Time also to think further ahead and further afield than the event on the village green.

This year sees the 13th Swiss Classic British Car Meeting which regular readers of Times will remember is staged at Morges on the shores of Lake Geneva.

Date for the diary is Saturday October 2 when 1500 cars are expected to turn out. Details of the event are still being finalized but usual rules apply – free entry and no prior booking required by public or participants. There will also be special deals on accommodation.

We'll keep you informed or you can log on to the Meeting website www.british-cars.ch

Better and better but Austin where were you?

'Adventure' was the theme of this year's Paris Retromobile held during mid-February. Needless to say the emphasis was on subjects like the half-track Citroëns of Georges-Marie Haardt, Darl'Mat Peugeots and, rather more obscure, the Delahaye of Courcel and Houard.

But if you discount a Vanden Plas 1300 as a draw prize, search the 20,000 square metres of hall space at the Porte de Versailles as your editor might, he was hard pressed to find anything relating directly to Austin, or indeed Rosengart. But that's hardly the point! The show is definitely worth the trip across or under The Channel.

Investment

However, don't expect a re-run of a typically British classic car exhibition. While Retromobile has got more polished and sophisticated as each of its previous 28 years passed, it is smaller, more informal and more quirky than its UK counterparts.

Where else would you find never-touch-the-tarmac, investment icons rubbing naves plates with a wax representation of Cruchot 'driving' a Mustang a la chase from *Le Gendarme de Saint-Tropez*?

Autojumble

Maybe the French don't take their classic cars that seriously and maybe that's no bad thing.

However there's some serious ogling and/or divesting of euros to be done.

British enthusiasts will get a chance to see legends they

would rarely encounter at home. I saw my first Renault Reinastella, Voisin Aérodyne, Panhard Dynamic, Pegaso, Excelsior and even Duesenburg all at Retromobile. And the set piece displays – called 'expos' – from giants like Mercedes-Benz are superb.

Don't expect too much either of the extensive autojumble unless you are restoring a French marque. Updraught Zeniths proliferate but they are usually XXL, and if you are not too much of a purist there are

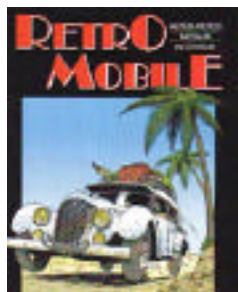


table creaking excesses of items like side and headlights, clocks, mags and Pyrenes!

If miniatures turn you on this could definitely be the place. Scores of stands offer everything from the ground-underfoot dregs of some Marseilles toy box to a minutely detailed tableau of Bentley's latest victory at Le Mans. And I did manage to find a couple of scruffy Dinky A90 Atlantics and an Austin Healey 100/4 vying for cabinet space with a mint and boxed Rolls-Royce Silver Wraith.

And baby made three

In the wonderful world of Austin we try to unite many different Longbridge disciplines for a convivial exchange of information and experience. Such a happening took place recently when Ruby, Big Seven and Eight owners came together under intriguing circumstances. Austin Times reader and a man of broad Austin interests Vic Hind was there.

by VIC HIND

The British magazine *Classic and Sports Car* wanted to do a piece on the development of the Austin Seven from the Ruby through the Big Seven to the alligator bonneted Eight writes Vic.

As a Big Seven Sixlite owner and a member of the excellent and active Big Seven Register I was invited to bring along my car for the 'photo shoot'. Leading light of the Register, Robin Taylor, managed to find examples of all three models plus a picturesque backdrop, all in the same geographical region.

Journalist Jon Pressnall and photographer Tony Baker met the team at Naphill, near High Wycombe, on an autumn day, so warm that even those as follically challenged as I needed no headgear.

Not scores, but hundreds of photographs and



transparencies of the cars went in the 'can' and Jon drove them at length and carried out in-depth interviews with myself and Ruby and Eight owners Bob Smith and John Cooper respectively. The day was rounded off with an excellent 'Italian job' at a restaurant in nearby Princes Risborough, the ten English

establishments we had visited - having, true to tradition, proved incapable of providing an impromptu, late lunch !

The article appeared in the January issue of *Classic and Sports Car* and, as a point of interest, *Austin Times* carried a major feature on the Big Seven in the Spring 2003 edition. More on Big Sevens later this year.



Times readers frequently ask us to run a technical section. So, to give you what you want, we've persuaded 'Arnold' to come out retirement from the garage trade of long ago

No rumble but a grumble

I'd just put me mug down on the old Harvey Frost and 'Tosh', the apprentice, was opening the bag of Welsh cakes his mum makes us for our 'elevenses', when the phone in the office rang.

It was a gent from the other side of town we never saw much of. He ran a 1929 16/6, one of the nicest cars they



ever built, and usually as good as gold. But a few years ago he'd had someone 'recon' the motor and had just had a new clutch put in to cure slipping and the 'kangaroos'.

Ever since she'd had what he told me was a deep grumbling somewhere in the engine. It came in, under load, in all gears, in a particular rev range, but was particularly bad in second or third when climbing steep hills. And there are plenty of those hereabouts, I can tell you!

SMOOTHNESS

I went back to me tea and gave Tosh something of a history lesson.

I told him how the engine in our gent's car was a development of the 20/6 which replaced the legendary 20/4. Sir Herbert Austin had wanted to improve the smoothness and power of this posh chassis and thought two more cylinders on the end would do the trick.

But by sod's law, on test, the new 'six' proved to be as rough as a badger's wotsit and nowhere near as smooth as the 'four' it was to replace. The answer was to fit a vibration damper to the front of the

crankshaft. And bob's your uncle, when the new '16' came out, they popped one on that too and turned it into the sweetest running Austin of the late '20s.

Tosh drove me out there in our old Seven van the following morning and we brought in the 'Sixteen', a very nice tourer as it happened. On the way, I noted the clutch was as sweet as a nut and oil pressure spot on, but climbing in third then second on the back way home she didn't half have a rumble in her guts.

Once we got her in and a brew going, the first thing I thought of was that vibration damper and the crank itself. If you don't know these old girls it's very easy to set it all up wrong and cause the customer problems long term and big time.

I warned Tosh that we were going to have to strip to the bare essentials – a big job in itself - and not only go over the damper but look at the crank for bow and twist. And I pulled him up short when he said such a stout piece of engineering could never bally well bow or twist. They can and do. And when they do they cause the sort of symptoms our gent was describing.

And, like to add insult to injury, I told him, as we were stripping to that extent, I was going to have him running tests 'til the cows came home; camshaft, timing chain and particularly the connecting rods for cracks.

These 'lads' are as slender as a ballerina's pins; and a real worry. They go when

you've got about 40 on the speedo and the consequences are not a pretty sight. I could have told him about the Sixteen hearse of similar vintage we pulled in a few years back after a rod had gone, but it would have made him weep like a widow!

When we got down to the real business of solving that gent's rumble we stuck to our Christian values of cleanliness being next to Godliness and



The 16's crank and camshaft with fitments

began with one of the most important jobs anyone can ever do. The bared crankcase went into a drum of cellulose thinners. And stayed there for 48 hours.

That melted years of gum, oil and varnish off the internal surfaces but I still had Tosh using a stiff paint brush and separate bowl of thinners to worry away at the stubborn deposits. Then I pulled my party trick – the long, thin, copper-bristle bottle brushes the builders of model steam engines buy to clean their boilers. These will get the oil

passages pretty clear but we still used a paraffin gun filled with more thinners to blast out all the passages again and give every surface a final clean.

It didn't apply to us but if the 'case had been oxidized, these days I would send it for aquablastering and vapour cleaning which leaves them 'as new'.

We then ran a tap through all the threaded holes and had I found any damage we

would have replaced them with a Helicoil insert. Minor imperfections we took out with a file, but had there been larger discrepancies it would have been an 'outside' job calling for light shadow grinding. We could now move onto the crank itself; a nicely made item. We used exactly the same cleaning technique as for the crankcase, but added a scrub with wire wool to take off the gum and varnish.

With my best steel rule and Tosh squinting under the edge for a show of light we checked all the machined surfaces for truth. And then it was time for some technical stuff. I mounted the shaft in vee blocks and used the dial test indicator to check for bow and twist.

Had we been going to regrind the crank I would have had it crack tested – properly; not dangly, dangly from the rafters, then jingly-jangly when hit it with a hammer stuff. And so we came to those connecting rods.



I sat Tosh down on our favourite oil drums and gave the poor lad another lecture.

The long and slender 'rods' are one of the great weaknesses of the 16/6 engine and the cause of many catastrophic failures. Seventy-plus years of metal fatigue on a design which was not as strong as it could have been, should cause great concern.

ROUGH RUNNING

I told him he should always get new rods made, no matter how good the originals looked. And if he was going to chance it; always check for stretch, bow, twist and arrange a crack test. And be sure who ever does the regrinding of the crank on these engines and re-metals the rods is dead accurate in their work.

Errors on crankpins and journals and out-of-true rods cause rough running at the higher engine speeds.

Having bent his ear enough for one afternoon we started back on the damper. However, it wasn't long before I was sounding off again. In these six cylinder engines, I explained, the crankshaft 'winds-up' as we call it; or, if you like, 'springs' slightly ahead of the flywheel at cer-

tain revs. This is more noticeable on engines like the 16 which use heavy flywheels and long stroke cranks.

What actually happens is as engine speed rises the 'winding up effect' moves along the crankshaft towards the flywheel becoming less noticeable. When the rpm fall the crank unwinds all of which is felt in the car as a band of rough running. Which is why a vibration damper is needed. It doesn't stop the effect but damps it down like a shock damper does on road springs.

Putting your foot down will make it disappear until the car slows into critical revs again.

Tosh could see that on the 16 the damper is a disc with a tapered boss which fits on the front of the crankshaft. In front of the disc is a small 'flywheel' which is able to rotate independently of the crank. The 'flywheel' is clamped to the disc by a set of small coil springs and friction rings which control its movement in the relevant rev ranges.

I told Tosh it was easier to follow the principle though if you look at our modern bonded rubber jobs. Here the disc is within the little 'flywheel' and 'bonded' radially to it by a thick layer of rubber.

If a spot of paint is put on the disc and a corresponding spot on the 'flywheel' and the assembly spun, the marks remain in unison until the critical rpm. Then the outer paint spot moves momentarily ahead of the inner before being 'pulled back' by the rubber element of the damper. This is how it stops them bad vibes coming on.

On the old 16/6 the springs and friction rings take the

place of the rubber. What we had to do after the cleaning process was use the dial test indicator to check the centre disc for truth. Then with fine lapping compound lightly grind it onto the crank'.

The friction discs needed examining for wear grooves and these to be ground out. But, very importantly, only after the total amount to be ground off has been measured and noted. It must then be added to the length of new springs.

The springs themselves must have a uniform free length and require roughly even poundage for a given compression.

SHOWROOM

When we had the crank' back in the 'case, we checked each end of the shaft for 'run out' with the dial test indicator. Tosh turned the crank while I watched the needle. Happy it was 'bang on', we mounted the damper disc and checked again for run out ready for final assembly.

Having got all this sorted and the job some ways back together, other things in the workshop pressed and as the customer was running around in a rather natty Goodwood we'd had in the showroom for a few weeks and the gaffer'd loaned him, Tosh and I decided to leave the 16/6 for a bit.

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Coaching for the premier division

CONCLUDING OUR LOOK AT AUSTIN PSVs

Even if the Bedford OB itself was virtually an unknown quantity, Longbridge should have been wary that its immediate progenitors had established a remarkable reputation.

Bedford had been on the bus and coach scene since 1931 when they launched the WHB and WLB with 131 and 157 inch wheelbases respectively. By 1935 the smaller vehicle had already disappeared from the catalogue, and that year the WLB was replaced by the slightly longer (167 inch) WTB.

FAR-FLUNG

In 1938 the WTB got a bigger engine and it was this 28 horsepower six cylinder which was to serve the famous OB so well in the post-war years.

By the mid 1930s - before Austin had even re-entered the commercial vehicle sector - 50 per cent of light or medium psvs sold in the UK were



All time classic; all time favourite, Bedford OB with Duple Vista body

Bedfords. In some regions nine out of 10 coaches were Luton built. And the company also had a presence in such far-flung corners of the globe as China and South America.

But the feature which contributed above all others to the OB's unassailability was design from the chassis up as a passenger carrying vehicle. Its two piece transmission shaft was routed to the left side of a double-drop frame, ladder braced like the Austin. The forward section of the shaft passed above the fourth

cross member, had the central universal joint bracketed there, but then slipped under the fifth to reach a differential close to the left wheel.

To make this simple arrangement possible, the Bedford's engine was skewed slightly in the chassis.

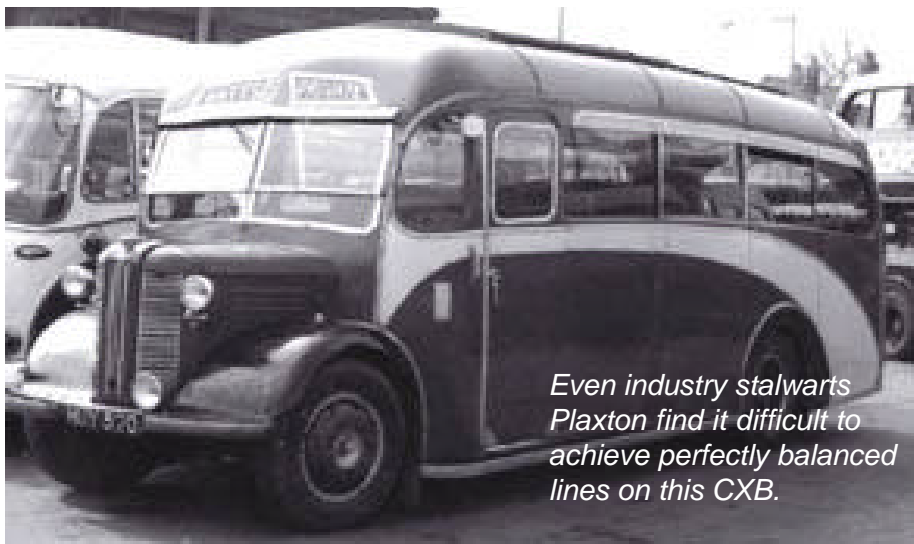
INGENIOUS

The explanation, for anyone who ever wondered, as to why an OB's starting handle hole is off-centre, unlike the comparable O Series lorry.

The sum total was to provide coachbuilders with the opportunity for a low floor and easy passenger access.

If the arrangement of the OB's chassis was particularly ingenious the overall mechanics were as straightforward as those of the Austin, and possibly rather cruder.

The Bedford six cylinder overhead valve engine of 3,519 cc (85.72 x 101.6 mm) developed 72 bhp at 3000



Even industry stalwarts Plaxton find it difficult to achieve perfectly balanced lines on this CXB.

rpm. It drove through a straight cut, sliding pinion gearbox to, again, a spiral bevel fully floating rear axle.

Suspension was by semi-elliptic leaf springs all round, the rear ones on negative camber at full load. As on the Austin there were no shock absorbers as standard on the OBs until the very end. Steering was by a worm and wheel gearbox.

Like Austin, the Bedford used Lockheed hydraulic brakes but with dual circuits worked from a tandem master cylinder and assisted by Clayton Dewandre vacuum servo. A further refinement was to place the rear slave cylinders outboard to avoid overheating when the assemblies were enveloped by coachwork.

SYNONYMOUS

Mechanical niceties were an optional tyre pump driven off the gearbox (technology known to Longbridge who had employed it on their wartime ambulance, but not now adopted) and a spare tyre as well as the wheel!

The early OB chassis cost about £500 and in the late 30s the Duple coachwork with which Bedford became synonymous would have added from £723 for a bus, to over £860 for a luxury 'sunshine saloon' coach, body.

In January 1945 with World War II not even over, Austin became the first manufacturer to rush into print with the announcement of a post-war range of commercial vehicles. These included what we know as the CXB normal control coach, although it was still not designated as such.

The most striking visual alteration was to the radiator grille where the three, horizontally ribbed, vertical panels had been replaced by a more modern design

The whole line-up was very similar to what had gone before, but as the three ton lorry chassis had gone in favour of a five introduced in the war, the coach was now based on this, and like all the other commercials, benefited from wartime experience.

The most striking visual alteration was to the radiator grille where the three, horizontally ribbed vertical panels had been replaced by a more modern design. This featured a central section with its thick vertical bars relieved by chrome trim. It was flanked by panels much like those of pre-war, but with thicker bars, three of whose equi-spaced number were also chrome embellished.

The radiator itself had the provisions for coolant expan-

It would seem unlikely any buses and coaches actually appeared until 1947, particularly as coach production was not even permitted until 1946

sion adopted for the big cars and military ambulance, as well as a revised pump. As in 1939 the fan was cowled.

In the engine itself the valve stems were now shrouded by an extension of the guide and considerable attention had been paid to the lubrication system. The mesh, 'basin'-shaped, filter located over the head of the pump between oil tray and sump base, favoured by Austin pre-war and which, on the commercials, was supplemented by an external by-pass filter bolted to the rear of the cylinder block, had been modified. There was now a more substantial, finer-gauzed strainer, in the cooler depths of the sump but still supplemented by the external filter.

CONFUSING

The oil-ways and distribution channels had been improved and Austin's patented synthetic rubber ring appeared on the cam gear to silence and tension the timing chain.

Other post-war modifications concerned toughening up the transmission with taper roller instead of ball bearings, to carry the differential bevel pinion shaft.

Another Austin favourite in worm and wheel steering gear had gone; replaced by Bishop high efficiency roller-cam and lever. The linkage ball joints got harder contact surfaces and better lubrication, while chassis spring hangers were strengthened.

There is no record of servo assistance for the brakes being announced at that January launch to dealers, but a Clayton Dewandre system -

Another, but very tired, CXB benefits from a nicely crafted early Whitson style.



similar to the OB's - was in place by the time production was gathering momentum in 1947.

Although Austin announced its post-war commercial vehicle programme at the very beginning of 1945 it would seem unlikely any buses and coaches actually appeared until 1947, particularly as coach production was not even permitted until 1946. But it has to be admitted the overall picture is a little confusing.

VOCABULARY

Contemporary company literature and the authoritative *Commercial Motor* magazine only refer to both pre- and post-war Austin psvs as 'the coach', and the lorries by weight classification and wheelbase. Somewhere along the line CXB passed into our vocabulary and alludes to the 15 ft wheelbase (25 foot overall) normal control OB-look-alike.

Not every authority agrees, but Keith Jenkinson in *Preserved Buses* (Ian Allan 1978) gives the currency of the CXB as 1947-50. Around mid-way of course, in 1948, it acquired the four litre

(3,992 cc 87 x 111 mm) engine. This was a development, for the Austin Sheerline car launched in 1947, of the existing overhead valve six.

As with Bedford the normal control coach seems to have disappeared from the Austin scene in 1950. But the 15 ft wheelbase chassis had existed in forward control form since 1948 and was to continue until 1955 as what we would call the CXD. Although it should be mentioned that some coachbuilders went for a forward control, or flat-fronted, appearance on the normal control chassis.

This simply involved paneling the forward section on

each side of the standard grille and must have made for a rather strange driving position but would have provide stowage, or even an additional seat, alongside the engine.

In his erudite article on Austin coaches in a 1986 issue of *The Vintage Commercial Vehicle* Chris Taylor quotes Salmesbury as exponents of this technique, and very nice it looked.

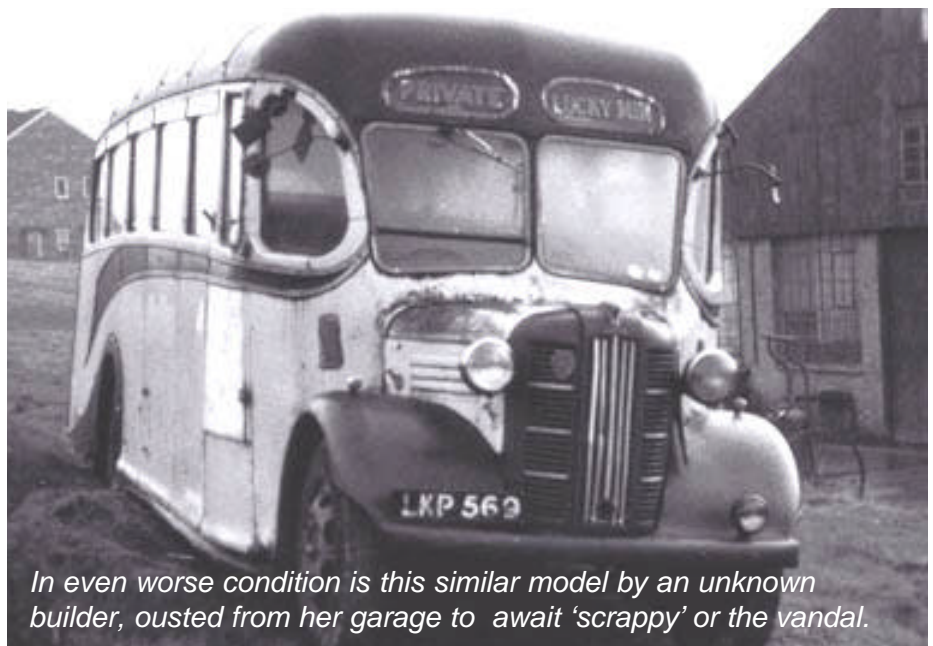
It appears likely early 'CXDs' were again simply called 'the coach'.

FAIR ASSUMPTION

By virtue of launch date, all would have had the four litre, 87 bhp engine. In 1950 a 'Series II' was offered with the option of a Perkins P6 4.7 litre (89 x 127 mm) diesel engine.

The latter developed a maximum 83 bhp at 2,400 rpm when it was delivering 202 lbs/ft of torque. It is a fair assumption CXD (D for diesel, perhaps) became common parlance at this time. Production then continued until 1955.

The most handsome of the forward control vehicles used



In even worse condition is this similar model by an unknown builder, ousted from her garage to await 'scrappy' or the vandal.

The demand for psvs in the immediate post-war years was such that some operators simply took the five-ton lorry chassis and bodied it as a coach

a version of the earlier grille contained within a gently contoured horsehoe shape. But when the body was more ungainly the squat grille of the now-current, normal control, 'Loadstar' truck was used with acres of sheet metal above.

To add to our recognition problems, the demand for psv vehicles in the immediate post-war years was such that some operators simply took the five ton lorry chassis and bodied it as a coach. Niftiest at this ploy seem to have been Guernsey Motors who resorted to treating about 29 lorry chassis this way between 1946 and '51.

The giveaway should always be the wheelbase (13ft 1 1/2 inches as opposed to 15 ft) and some of the psv refinements we have considered would also have been missing although, hopefully, these shrewd innovators would have remembered to re-route the truck's longitudinal exhaust system, finishing mid-way along the frame, to emerge at the side!

The same comments apply to the contemporary two ton lorry chassis which, on a wheelbase of 11ft 2ins could, and did, make a useful little bus for about 20 passengers.

One final coach from this era remains. The K8 was a 25 cwt van current from 1946 until 1953. It used the four cylinder overhead valve 2,199 cc engine from the Austin Sixteen car, had Girling hydraulic brakes all round and a wheelbase of 7ft 9 ins. The selling point as a van was doors in the sides of the cargo space as well as at the rear, leading to the sobriquet 'Three Way'.

'WELFARER'

But the K8 also saw service as a smart ambulance called the 'Welfarer' and, of course as a 14/ 16 seater mini-coach. Firms like Kenex from Ashford, Kent, who concentrated their activities on Austin forward control chassis, left little doubt their offerings were merely passenger carrying K8s. However others, such as Plaxton, could squeeze the classic Venturer style onto the 15' 7 ins long (9ft wheelbase) frame for a really elegant effect.

SOLDIERED ON

Longbridge withdrew from the domestic psv vehicle market in 1955 to concentrate on their other commercials. But they launched a Series III version of the CXD in 1956 for overseas customers and this soldiered on for many years. The four litre petrol engine continued to be an option alongside a new 90 bhp five litre BMC diesel.

Coachwork was often by Mulliners of Birmingham - not to be confused with the firm later commonly associated with Rolls-Royce - and there were often as many as 44

seats on the old 15 ft wheelbase chassis. (Even in the days of the CXB canny foreign customers managed to get 42 aboard with an eight row, three by two seat layout, plus double seat beside the driver!)

Any entrepreneurial operator who paid their £515 for the Austin 'CXB' chassis in 1947 got front wings, the bonnet and cowl, bumper, registration plate, head and side lamps and a dashboard into the bargain. And there were numerous coachbuilders waiting to take more than half as much cash again for the body.

Most famous of the firms who built for Austin is probably Mann Egerton from Norwich. Apart from being Austin dealers the concern had a long coachbuilding history. Not only did they construct limousines, but built the special Daimler 'invalid car' which in February 1929 carried King George V to a 13-week convalescence at Bognor Regis. Less high profile were the hundreds of Austin 'Katy' ambulances they constructed for the war effort.

By the mid-50s Mann Egerton had at least one body specifically for the Austin chassis.

Called the Norfolk it was a handsome offering using

Why did Austin, who were so successful in other categories, fail to make a significant impact with their coaches



More flamboyant than the CXBs we have seen before, the builder of this example with its horns, lamps, spats and fairings is, for the moment, a mystery. The operator though is J Beadle.

hardwood inserts panelled with aluminium over a light steel frame.

The overall finish was to the classic formula of the period with interior lights on the pillars of the openable window, luggage racks above the seats and moquette and leather upholstery.

Other 'big names' who clothed the Longbridge product were Plaxtons, of course, and even Duple.

This London based company, however, will always be associated with the Bedford OB. Duple dated back to before World War I and had made their name - literally - with a dual purpose body which could be used for trade purposes during the working week and as passenger transport at weekends.

Throughout the inter-war years business boomed at home and broad as commercial vehicle bodies - and a few for luxury cars like Austin and Vauxhall - were built, first at Hornsey and then Hendon, to the north of the capital.

During World War II, Duple became very familiar with the Bedford chassis, constructing more than 2,000 'utility' OWBs. And when peace returned and coach manufacture was permitted the relationship

continued with the reintroduction of the 1939 Vista body on the OB frame.

There is no doubt the Vista (known within the works as the F Type) is one of the classic vehicle designs of all time. Lovely from any angle, it was built on a steel reinforced ash frame with bolted joints and panelled almost entirely in aluminium.

FABRIC COVERED

Early examples were embellished by generous quantities of varnished wood, but this was reduced when avant-garde Formica replaced fabric covered steel for the interior panels.

Our entrepreneur would have paid about the same for a Bedford as an Austin, and it would have been delivered to

Mann Egerton of Norwich probably built more coach bodies for Austins than anyone else. This is an exclusive design specifically for the later forward control models

the body builder with much the same basic metalwork - front wings, bonnet etc. And once in the owner's hands the two vehicles would have been similar to operate and run.

Although neither was aimed specifically at the one-man operator, for anyone of average mechanical ability they were no more complicated to maintain than the average car and, size apart, supposedly no more difficult to drive. While this must have appealed to a whole section of customers in the 40s it is one of the criticisms you sometimes hear from hobby classic bus owners today!

So why did Austin, who were so successful in other categories - private cars, London taxis and for a short time, agricultural tractors - fail to make a significant impact with their coaches.

Arguably the Austin had a better engine than the Bedford. Not only was the four litre version more powerful it was easier to work on.

For example, the prescribed, very tricky, method for undertaking the routine task of setting tappet clearances on the Luton product was with the engine running, whereas the Austin only required



conventional static adjustment. The Bedford though had superior brakes. Although later Austins were to get servo assistance the OB had this feature and other braking refinements from day one which must have made the responsibility of having the lives of some 29 souls in your hands somewhat less worrisome.

Dictated

Whatever the fine trimmings, it has to be said 'Longbridge' had not sat down specifically to design a coach whereas 'Luton' had.

The standard commercial vehicle back axle dictated the floor height and both waist and roof line. This necessitated too deep a windscreen and usually excesses of panelling beneath the back window. Therefore, compared with the OB with its elegant, beautifully proportioned coachwork, the Austin had a more cumbersome look.

Even when the body was not by Duple, and there were at least another 40 coachworks which built for the OB, the essential details of the chassis gave them the chance to provide pleasingly balanced lines.

Stan Hickmott is a UK coach operator from Ashford in Kent and runs a pristine example of a 1950 CXB with Plaxton 29 seat

New to Born of Okehampton this Plaxton bodied CXB continued service with Stan Hickmott of Ashford



The black and white pictures which appear with both parts of this feature were given to Austin Times by enthusiast Ian Grainger and we are extremely grateful to him. Sadly some of the coaches featured are at the end of their lives and almost certainly no longer with us. It has not always been possible to positively identify the coachbuilder and sometimes not even to be certain of exactly which model is portrayed.

coachwork.

The Hickmott vehicle was new to Born's of Okehampton, Devon, and straightaway gives us some indication of how highly these Austins could be regarded as it was hired by the prestigious Royal Blue Company for relief work on their important Exeter to London Victoria route.

The fact Hickmott still use the Austin commercially is a tremendous tribute to the practicality and durability of the model and by also appearing at classic vehicle shows it does much to advertise the comprehensive nature of Longbridge's product range.

Talking to *Austin Times* about the coach Mr Hickmott said: "I decided to buy the CXB because I liked Austin cars, but to be perfectly honest I

don't think there is a great deal to choose between Austin and Bedford.

"When both vehicles were competing in the market place cost would obviously have been an issue but I think we also come back to the fact the Bedford OB chassis was better suited to coach bodywork and not simply a 'lorry' chassis as was the Austin.

More Difficult

"In service I find the CXB is quite easy to drive - not quite as straightforward as a big car, as the steering is pretty heavy and the gearbox more difficult. Knowing both the Bedford and the Austin, I honestly couldn't say that one engine is better than the other but certainly Luton's brakes are superior."

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Mystery Tailpiece



