

HOW WELL DOES YOUR LIGHT 15 SIT?

Most of we Light Fifteen owners own the Repair Manual which holds us in good stead to understand the peculiarities of our Pride and Joy. However, when we consult page I34 'Adjustment of Load Distribution'

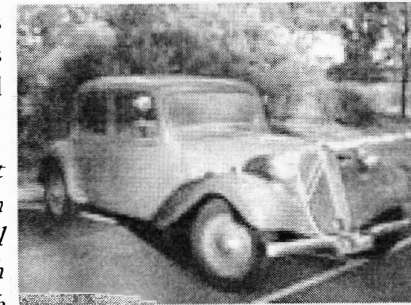
Now, just as a matter of interest, if we turn again to page I34 it states that 'the load distribution on each wheel is of great importance in the matter of road holding, braking and tyre wear.'

As you know, those that have attempted to follow me will confirm that I drive my Light 15 with great gusto, and that these matter are of great importance; so I decided to investigate

this matter further! The manual suggests that the port and starboard wheels of our cars should equally share the weight and subsequent pressure upon the road surface to get the optimum handling performance. It does not mean that the front

wheels should carry the same load as the back pair, but as individual pairs they should provide equal load sharing.

To get one's mind around this subject I will draw an analogy to the problem of placing a 4 point object on a level surface without it rocking and with two points taking all the weight. We all know about tables and chairs with 4 legs that can only be brought into a stable condition by force or correction with a saw or packing. Then if we do finally forcibly bring the two reluctant legs into contact with the level surface, the chair or table's structure is being strained. The offending legs, upon contact exert a minimal force to the level surface, whilst the remaining two legs take up the applied correcting force on



the surface, plus the weight of the structure.

Now, when we look at our Pride and Joy sitting with all wheels upon the road we are smugly confident that all is well – but is it?

Could it be during that last experiment with the torsion bar adjustment we may have made a slight error or possibly that last jaunt on the Raid could have had some effect?

Are you sitting COMFORTABLY?

and then refer to page 94A of the Illustrations Section of how the WEIGHT DISTRIBUTION of our Light 15 can be checked we forget about it and turn the page to more pressing problems!

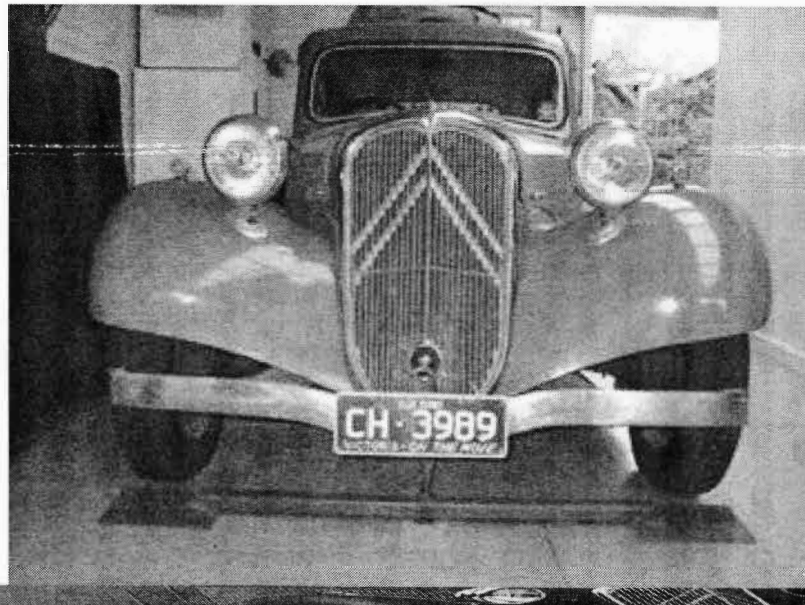


Photo 1: Shows the device on a level surface prior to the vehicle being rolled on to the two wheel pads of the scale beam, making sure that the fulcrum lifting screw is at the central axis.

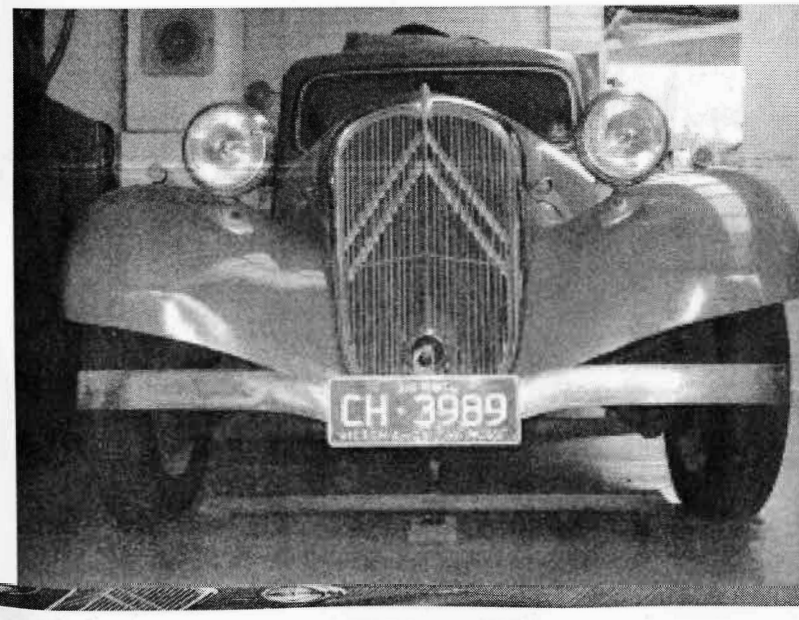


Photo 2: Shows the device in position under the wheels (making sure all tyre pressures are equal) with the vehicle lifted off the level surface by the central fulcrum lifting screw.

After this gloom and doom we may have a solution to put those sleepless nights behind us – at least for those users whose cars are not in trouble!

We all know that tables and chairs with 3 legs always sit upon a level surface without rocking, with all legs sharing the load equally – a tripod –

Are you sitting COMFORTABLY?

with the structure being strainless. The idea that I am putting forward is that the LI5 is suspended about its central, longitudinal axis upon three points [forgetting the wheels for the moment], so that the whole vehicle structure is strainless. We can now observe how the four contact tyres relate to a level surface

whilst still supporting the vehicle weight on its tripod.

A device was constructed whereby the front wheels only were lifted off a level surface by a beam with a fulcrum point, providing a balance about the central longitudinal axis of the vehicle [like weighing scales].

Photo 1: Shows the device on a level surface prior to the vehicle being rolled on to the two wheel pads of the scale beam, making sure that the fulcrum lifting screw is at the central axis.

Photo 2: Shows the device in position under the wheels [making sure all tyre pressures are equal] with the vehicle lifted off the level surface by the central fulcrum lifting screw.

Photo 3 depicts a close-up of the port wheel, on the fulcrum, clearly

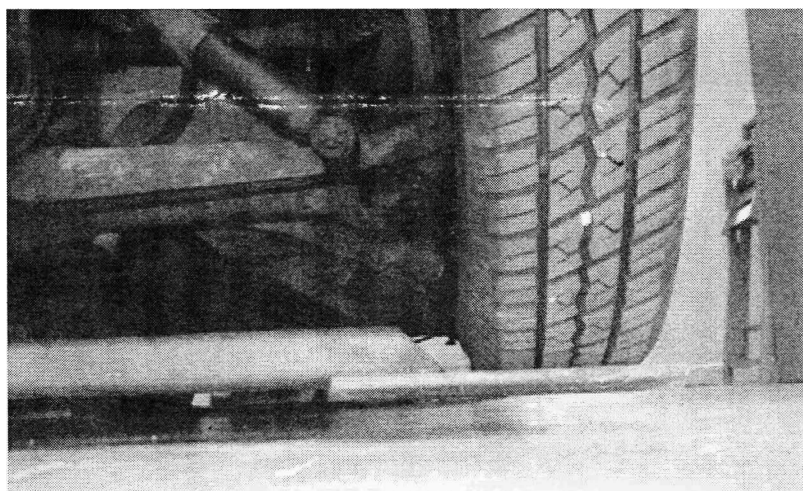


Photo 3 depicts a close-up of the port wheel, on the fulcrum, clearly showing the beam of the fulcrum on an angle.

showing the beam of the fulcrum on an angle.

Hey presto! What do we have? Hopefully, a strainless vehicle with a perfectly horizontal beam with the front wheel pads equal distance from the level surface.

On the other hand, there could be a variance and one has to decide what to do. With my Light 15 there is a variance of about 10 mm. The port front wheel being higher than its corresponding starboard wheel. I decided, after checking the under-floor vehicle heights, that the rear

portside wheel could be raised a fraction and that the built-in adjustment means would attend to this!

Now this is the subject of another 'How To Do It'. It will not adjust even after much Penetrene and considerable persuasion. In any case, 10 mm is not a lot and I intend to modify my extravagant driving habits, anyway!

For those who cannot sleep at night the device is available to try out through Rob Little.

Bernie Hadaway