

## Lagondaforum: De Dion / Transverse bars

### Re: De Dion / Transverse bars

*Written by randall977 at Sep 04, 2012 1:42 pm*

I spoke to Barry at Wren and he was very helpful, he's restored three Rapides so knows his stuff. He told me that if you loosen the aluminium mounts, release the straps and lower the de Dion with a jack then it will come apart without a problem.

I will take a few photos when I do it and post them...

The trailing arms will need work, as you point out the two plates trap moisture and then push apart - mine have done this on a small section but just along the edge...

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### Re: De Dion / Transverse bars

*Written by David at Sep 04, 2012 11:18 am*

Christian, I don't know how the geometry of the transverse torsion springs works as I've only seen one lower trailing arm off the car so have not seen both side by side to visualise the securing arrangements for the end of both springs. You are right that there is a lever on each spring about half way along, and these are used to adjust the rear ride height as far as I know; do these need to be released as well?. In addition each side has a webbing strap as a "bottom stop" to prevent the de Dion dropping too much. I guess these may have to be released in a controlled way once the aluminium casings have been removed in order to allow each spring to fully unwind for removal. I was at Wren 2-3 weeks ago and am having some difficulty now visualising just how Barry got the suspension to the state of disassembly I saw. Certainly the half shafts, brakes & hubs have to be removed from each side of the de Dion, either to permit access or to reduce mass. They also took the opportunity to refurbish the lower trailing arms, which as you know are made of 2 pieces of sprung steel riveted together, and which are a hidden rust trap, as well as represerve the other original components and chassis all around (although no welding was needed)

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### Re: De Dion / Transverse bars

*Written by randall977 at Sep 04, 2012 9:57 am*

Thank you David, I wasn't wasting my time after all! I had a good look at it all last night and tried to familiarise myself with the setup.

It's a fascinating bit of engineering - massive structural members - I've never seen anything like it on a car. So the transverse bars are one in front of the other - so does that mean that the aluminium trailing arm mounts are offset by around 3"?

The torsion bars are mounted part way across to the underside of the rear seat with arms which are adjustable? I can imagine that allowing the de Dion to drop too much would shatter the alloy cases - I wonder how they prevented that from happening? - I hope to find out later...

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### De Dion / Transverse bars

*Written by randall977 at Sep 03, 2012 12:24 pm*

I'm probably wasting my time asking but does anyone know how to safely release the tension in the transverse torsion bars on the rear suspension? It looks like when you lower the rear axle the aluminium trailing arm mounts will act as stops before the bars can be unwound?

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### Re: De Dion / Transverse bars

*Written by David at Sep 03, 2012 6:21 pm*

Christian, I'd call Barry at Wren for how he did mine. I'm supposing the tension in the spring is supported by a jack under the trailing arm, the outer aluminium casing is removed (it has the stop lugs in it) then the jack is lowered allowing the torsion bar to unwind safely. BTW one if not both my outer casings broke on removal

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### Re: De Dion / Transverse bars

*Written by randall977 at Sep 10, 2012 8:47 am*

I managed to remove most of the rear suspension on Friday, it was hard work.

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Once the damper arms, links and straps have been removed simply allow the de Dion to drop and unbolt, it is VERY heavy. In order to remove the trailing arms a very heavy duty puller is required.

The bushes within the aluminium casings were in good condition. Only one UJ needs to be replaced out of everything I removed, I will replace all the bushes anyhow...

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### Re: De Dion / Transverse bars

*Written by David at Sep 10, 2012 12:00 pm*

Ah yes sorry should have mentioned their weight; on your rating, take care with the differential because it is VERY VERY heavy! (70-80kg plus at a guess)

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### Re: De Dion / Transverse bars

*Written by randall977 at Sep 11, 2012 10:33 am*

The differential looks heavy, I'm not sure if I will drop it as there's no real reason to...

Barry and Wren told me that the trailing arm bushes which attached to the de Dion are not the same size as the front suspension upper bushes (they look the same). The options available are either to get a polybush and ream it out or machine down the de Dion pin to accept a standard DB5 upper wishbone bush (C3003).

The bushes which take the ends of the transverse torsion bars have not been identified yet but I wonder if they are the same as XKE upper control arm bushes (C8673)?

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### Re: De Dion / Transverse bars

*Written by David at Sep 11, 2012 11:59 am*

Are the rear arm bushes not from a DB4 (20-26-118) or am I misinterpreting which component you're referring to (like 20-23-120?)

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### Re: De Dion / Transverse bars

*Written by randall977 at Sep 11, 2012 12:19 pm*

Hi, the bushes are the ones indicated by the arrows below.

The one on the RHS is not the one from Wren (which were recently made) but a small bush which holds the loose end of the torsion bar (looks a bit like 20-23-120 but much bigger).

The bush indicated by the arrow on the LHS looks the same as 20-26-118 but the hole is too small so annoyingly it won't fit and no alternative is available...so something has to be altered.