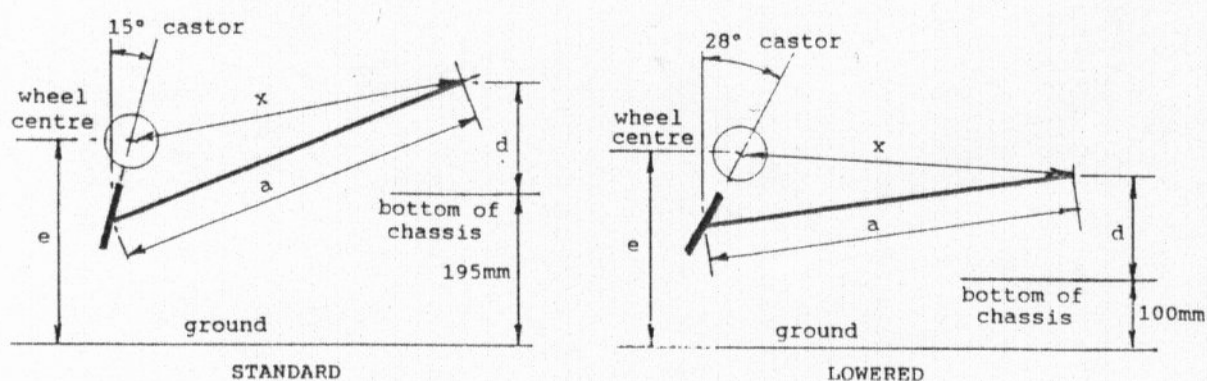


FRONT SUSPENSION CASTOR ANGLE CORRECTION

Do you have a lowered suspension, small diameter steering wheel, fed up with eating cans of spinach or want to give up Anne diabolical steroids, then you need a castor angle conversion. (sounds painful)

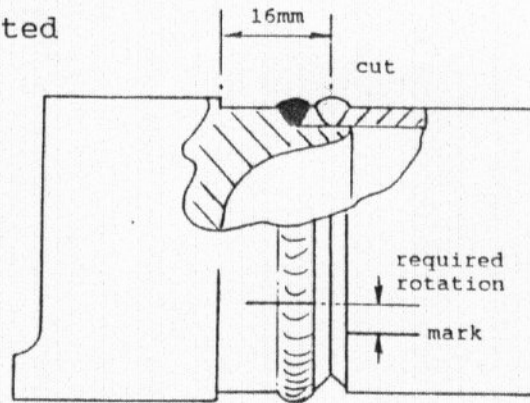
First let me explain what happens. When you lower the ride height from the standard Citroen setting the castor angle increases considerably. This gives you good straight line stability but not only reduces the turning circle but makes the steering very heavy. At the standard ride height the castor angle is 15 degrees. When it is lowered, lengths a , x , e and d stay the same but the castor angle increases and this is what causes the problem.



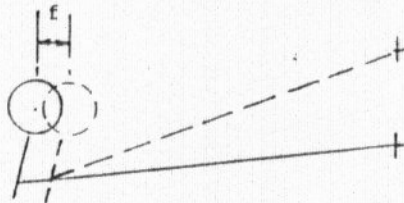
It has been found by design on the drawing board that to regain the 15 degrees for a 125mm (5 inch) ground clearance, the casting at the end of the arm needs to be turned 5mm and for 100mm (4 inch) ground clearance it needs turning 6.5mm measured on the cut line.

As can be seen on the drawing the casting is welded to the tubular arm. There is a spigot on the casting that inserts into the arm. What we need to do is to carefully cut through the arm but not the casting. It is not good engineering practice to cut an existing weld and reweld it as the adjacent material is effected by the heat from the first weld and would cause a weak join. What we can do is to cut at the distance shown so that the spigot is retained and can be used as a locator in the arm when rewelding. The marking needs to be very accurate and I would recommend the use of dividers. Before cutting, scratch mark a line across the existing weld and down the arms length either side of the proposed cut line to give a register when turning the casting. This needs to be quite substantial as it could be lost when preparing the ends for welding. The tubular arm is 2.5mm (1/10 inch) thick. I found that if a new hacksaw blade was scratched marked at this dimension it was easy to saw around the tube and not cut the casting.

Once the casting has been separated from the arm the ends can be prepared for welding by filing 45 degrees angle on the ends. The casting can now be turned the required amount (make sure you turn it the right way) and welded. I tack welded mine and then enlisted the help of a qualified welder to complete the job.



However when the castor angle (at f) is corrected it effectively increases the wheelbase by 25mm (1 inch) and this in turn causes the track rod adjusters to be screwed right out to their limits.



Although this works I feel it would be better to modify them by either putting a sleeve around the centre section or by welding up the slot in the unclamped part. When completed the cycle mudguard brackets need a small modification to bring them into line. After this modification I have found that the steering is now much more positive and makes for more enjoyable driving.