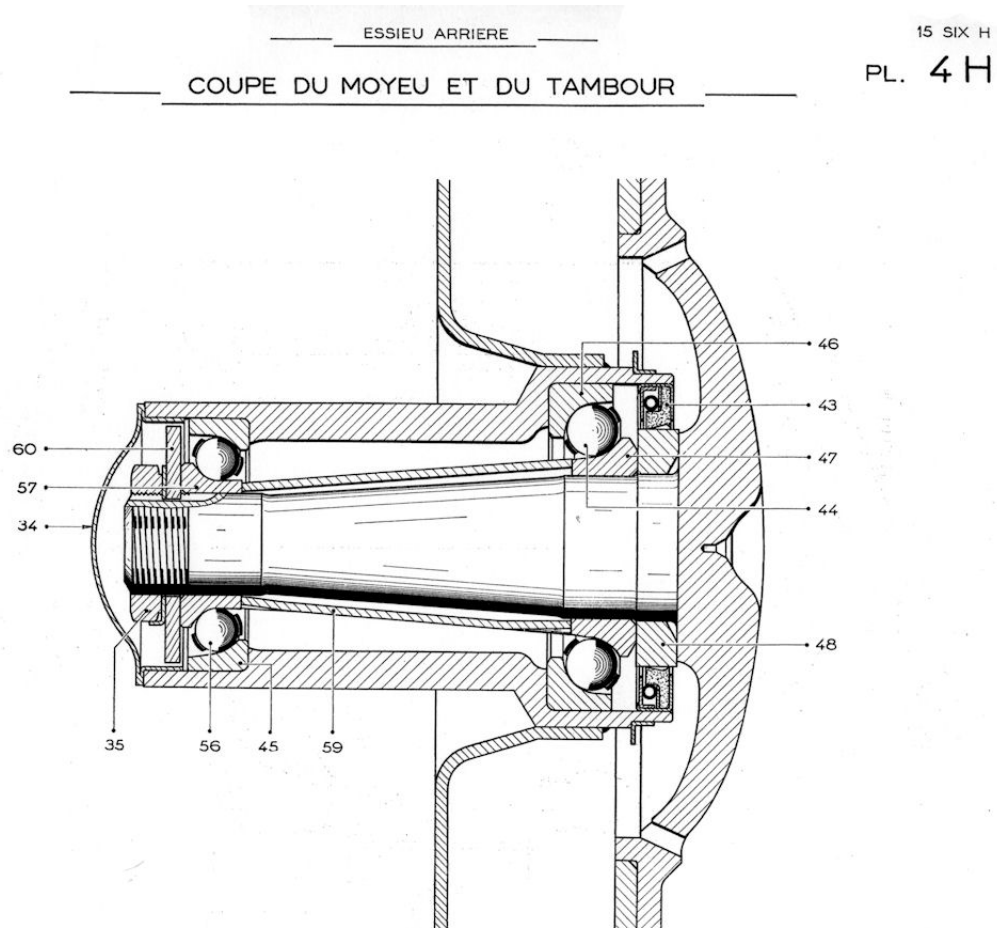


Replacing the rear wheel bearings - Traction Avant 15-H

The rear wheel bearings of the 15-H are of a different construction compared to all other Traction models. The construction is very similar to that of the DS/ID. Not surprising, because the rear suspension of the 15-H was a predecessor of that of the DS. With the exception of a few details, the construction remained unchanged throughout the entire production period of the DS (1955-1974)..



The Workshop Manual contains a cross-sectional drawing that clearly shows the details of the rear brake drums and bearing construction. The workshop manual also shows some special tools needed to remove the drum and bearings. The bearing consists of two so-called angular contact ball bearings, each of which can be divided. There is a conical steel bush between the bearings that is intended to keep the ball bearings at the exact correct distance after tightening the large nut. Such bushings were available in increasing sizes (0.05 mm); later there was one standard size bushing that had to be supplemented with shims. Although this construction seems complicated, it has proven to be extremely reliable. There are DSs where the rear wheel bearings have lasted several hundreds of thousands of kilometers.

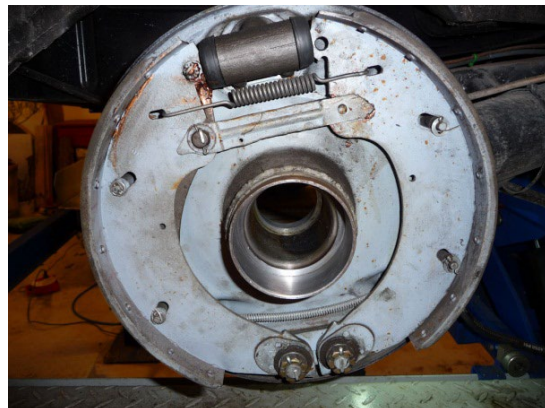
Moisture and rust are the main causes of wear on the rear wheel bearings of a 15-H. Because the original split bearings are no longer available, an alternative will have to be used. Fortunately, there are even two possible replacements, with the big advantage that the spacer bushes and thus the laborious calculation of the distance between the bearings can be omitted. On various DS websites and forums you can read that official Citroën dealers used this method when replacing wheel bearings on the DS.

The rear wheel bearings can be replaced with either non-divisible angular contact ball bearings or divisible tapered roller bearings of the same well-known type used on the rear wheels of all other Tractions. The parts store for the DS/ID supplies complete sets of rear wheel bearings. On the 15-H these can only be partially used because the outer bearing of the 15-H has a different size. The inner bearings of the 15-H and the DS are the same.

| Measurements en Typens rear wheel bearings for the 15-H | | | |
|--|---------------------|---------------------|-----------------------|
| | Measurements | Ball bearing | Roller bearing |
| Buiten | 35x80x21 | 7307 | 30307 |
| Binnen | 25x62x17 | 7305 | 30305 |
| Keerring | 58x80x10 | | |

On my gray 15-H the original rear wheel bearings had already been replaced by tapered roller bearings. Apparently this was done by someone who didn't know what was going on, because the spacers were still there. In addition, the bearing clearance adjustment was incorrect. It was also striking that the large flat nut could only just be turned onto the axle journal (the tapered bearings are a few mm wider than the ball bearings).

Because one of the bearings was damaged when disassembling the drum, I decided to replace it with ball bearings. These can easily be ordered via the internet at www.neita.nl and will be sent by post a few days later after payment. The attached photo series shows how everything worked. It is clearly visible that the flat nut fits better on the thread. In addition, a new locking plate and Loctite were used to secure the nut.





Opmerkingen en tips:

- <http://citrotech.nl/shop/wp-content/uploads/2010/10/Vervangen-van-de-achterwiellagers-bij-de-Citroën-ID.pdf> has an instruction from the Citrotech company on replacing and adjusting the tapered roller bearings.
- When using replacement ball bearings, some material will need to be ground off the square pressure plate to prevent the corners of the plate from touching the outer ring of the bearing (see photos).
- Adjusting the ball bearings is done in almost the same way. After mounting the bearings in the support arm, the drum with the axle journal is pushed as far as possible into the bearings. On the inside, the thread now extends far enough through the bearing to allow the pressure washer and nut to be fitted. Pull using the nut and the axle journal fully into the bearings. The bearings are then completely locked and some resistance will be felt when turning the drum by hand.
- Loosen the nut and install the (new!) locking plate. Apply some Loctite to the threads of the axle journal and tighten the nut completely. Then loosen the nut until it is tight tapping with a hammer with a piece of impact bronze against the end of the axle journal - drum can be rotated without resistance. The trick is to adjust the bearings not too tight, but certainly not too loose.
- Then secure the nut using the locking plate. Apply sufficient - but not excessive - wheel bearing grease and install the dust cap.
- Then adjust the brake shoes correctly again.

Karel Beukema toe Water
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