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Front wheel bearing

Avensis D4D

The Toyota Avensis 2.0 D4D was introduced to the market in 1997. It has seen three generations, the most recent from 2009 on. With a repair time of 2.1 hours, this article will assist any garage with the removal and repair on this popular model.

In this article we tackle the second generation Avensis D4D front wheel bearing. The type of bearing used is a generation 1 bearing with no encoding sensor built in, so the bearing can be installed either way, however it can still be a little tricky, as the bearing has to be pressed into the hub. If done incorrectly, the bearing can be damaged.

Firstly, check to see if the vehicle is fitted with anti theft locking bolts if it has alloy wheels. If it does, make sure that you have the key before starting the repair. Raise the vehicle on the ramp to the full working height (although the repair could be carried out on the floor if necessary) and remove the wheel on the relevant side. It is advised to replace the wheel bearings in pairs, as it is more than likely that the bearing on the opposite side is just as worn as the one you are replacing.

Undo the large hub nut that secures the drive shaft to the hub and release the drive shaft from its position. Clean the track rod end using a wire brush, to remove any hard rust and remove the locking pin. Loosen and remove the nut from the track rod end and release from its position and move to the one side.

Remove the brake calliper and support it by hooking it directly to the coil spring (fig 1). Remove the two bolts that secure the brake calliper mount to the hub and remove the complete assembly away from the work area. You will need to gain access to the wheel arch, but the removal of the wheel arch liner is unnecessary, just remove the fixing bolts to the front half of the liner and allow it to hang down (fig 2). The ABS sensor is to be disconnected and this is found inside the wheel arch. With the liner now free, you will have enough access

to reach the sensor and disconnect it. Remove the ABS lead from its support bracket once disconnected.

Release the wish bone from the ball joint by removing 2 bolts. Undo the two bolts that secure the hub to the suspension strut to release the hub from the strut. With the hub removed, we can now concentrate on the removal of the bearing. The drive flange has to be removed from the bearing, in this example



we used a strong steel tube positioned centrally on the flange. Using a press, carefully push the flange out to remove it (fig 3).

Remove the back plate from the hub to make it easier to remove the bearing and remove the circlip. We removed the bearing from the wheel hub by using an old bearing and a press to push the bearing out. Because the bearing can be fitted either way, it could be a good idea to note the position of the old bearing and install the new bearing the same way.

The inner raceway of the bearing will then have to be removed from the hub. It can be a little tricky to attach a puller securely to remove this. Hold the hub secure in a vice and with a

die grinder carefully score part way through the inner race just enough to weaken it and taking extra care to not cut right through and damage the hub (fig 4). Using a blunt air chisel to crack and then remove is a nice, controlled way of removing the inner race without causing damage.

Once the bearing has been removed, take the time to check that the hub profile is perfectly round and not damaged. The outer race of a bearing will always take the shape of the hub its being pressed into, so if the hub has been damaged and is not perfectly round this could prematurely wear the bearing. Clean the hub and drive flange to remove any dirt and rust.

When you fit the bearing into the hub, make sure you press on the outer race and not on the flange. By doing this, you ensure that the pressing force is not transmitted through the balls or rollers in the bearing, but only through the outer race. In our case we are using the old bearing to press the new one into the hub, as this will be a perfect diameter and will not cause any damage. The new bearing will have a new circlip supplied, which can now be fitted. After finding a suitably sized tube the same size as the inner race, the hub can then be pressed onto the drive flange, avoiding any damage to the ball races.

The installation of the remaining parts are the reverse of the removal.

For technical support and repair installation tips, go to www.RepXpert.com or you can call the LuK technical hotline on 0044-143-226-4264

