

Quality-Safety Alert!

by Tom Endy

Front hub dust seal (A-1190):

There is a front hub inner dust seal, part number A1190, on the market today that is of such poor quality that it can cause you a considerable amount of grief. The A1190 fits onto each front spindle behind the large inboard front wheel bearing. The parts are being made in India and most Model A Ford suppliers probably have them in their stock. The part can be referenced in an East Coast preferred supplier's parts catalog on page 3.

Preferred supplier modification:

This supplier discovered one aspect of the out of tolerance condition and took steps to correct it. In their catalog they state that the outer circumference was .006 oversize, such that the wheel hub would not fit over it. They had all parts in their stock turned down on a lathe for proper fit inside a hub.

The encounter:

I had a need to replace the front wheel bearings on my Victoria and I had difficulty getting the large inboard bearing off of each spindle. I had to remove the large outer grease slinger from the backing plate in order to get a chisel behind the A1190 dust seal. While prying off the seal and bearing, I butchered up one of the seals. When I ordered the new set of wheel bearings from the preferred supplier I also ordered two A1190 dust seals. When the order arrived, for some reason I was only sent one. Since I needed a second one I went to a local supplier and purchased one. Their price was 40% less than what the preferred supplier sells them for and this aroused my curiosity. When I got home I re-read the statement on page 3 of their catalog. Obviously the higher price reflected the cost of turning the part down on a lathe.

Time to measure:

I measured the outer diameter of the one purchased locally and found it to be .030 over the preferred supplier one and also .030 over one I had removed from the car. The one purchased locally would also not fit inside the hub, which was conveniently sitting on my workbench and afforded the opportunity to check it.

A more sinister problem:

My plan was to install the one from the preferred supplier on one wheel and one I had removed from the car on the other wheel. While comparing the two I noticed that the flange on the inner circumference of

the preferred supplier part was uneven and varied about 1\16th of an inch. I also noticed that when pressed onto the spindle the flange (lip) protruded past the seat where the large inboard bearing is supposed to come to rest. I compared the one from the preferred supplier with the one I purchased locally (both made in India), and they were both the same. Had I not noticed this I would have installed the bearing up against the uneven protruding flange and I would not have seated the bearing, and there is no way I would have known that because one cannot see behind the bearing because the A1190 dust seal blocks the view.

Four critical dimensions:

There are four critical dimensions concerning this part, and the India made parts are out of spec in all four areas.

1. The outside diameter must be smaller than the outside diameter of the bearing race pressed into the hub (the bearing race O.D. is 2.5005).
2. The inside diameter must be such that it is an interference fit onto the spindle (about 1.635).
3. The outside diameter flange (lip) must not exceed the depth above where the bearing race seats in the hub (about .250).
4. The inside diameter flange (lip) must be less than the distance from the base of the spindle to where the bearing seats (about .200).

The unsafe condition:

If an unsuspecting person installs one of these poor quality dust seals the hub will be bound up against the outer diameter of the dust seal, that is if you can get the hub on at all. The lip on the outer circumference could also be up against the edge of the race pressed into the hub. If the inner circumference is not a press fit it can come loose and rattle around loose on the spindle. If the inner circumference lip is too high the bearing will not be properly seated because it will be up against the inner flange of the dust seal and it may be cocked to one side. The result of all this would be bound up and/or wobbly front wheels.

Problem resolved:

I was able to resolve my immediate problem by removing the A1190 dust seals completely and installing the new wheel bearings without them. I believe I read somewhere that these dust seals were not originally installed on the Model A Ford during manufacture.☺