

Laupen, 09.11.2007

Dear Paul,

I am glad to help you out with the little bearing.

Just let me explain to you what experiences I have had so far.

In Spring 2005 I have done a complete overhaul of the gearbox (probably the first at all of this gear box)

I replaced all the bearings. The little bearing concerned was falling to pieces and both shaft surfaces were worn away to a great extend. (picture 1)

In my opinion this fact creates the famous second gear noise on the Augustas. With the little bearing worn, the primary and secondary shaft with their respective gears to not mesh properly anymore and thus causing the noise.

I then had both shafts hard chromed and ground to the original size. I bought 2 RIV 4108 LRT bearings and installed one of them. This cured the noise perfectly and it was this condition we went to the Sliding Pillar 2005 in Belgium and later in the same year to the Lake District were you had a ride in my car.

Shortly after the return from the Lake District the second gear became noisy and I opened the gearbox again. I found the little bearing had no visible damage but the chrome on both shafts was worn away over a driven distance of only 3000 miles. (pictures 3 & 4)

I then looked for a suitable needle bearing which could be installed with only a small modification. I got a SKF NA 4901 and had the shafts ground to the size as in the drawing. (pictures 5 & 6) The inner shell is a press fit and the outer shell is a close sliding fit secured with Loctite but not blocking the lubricating holes.

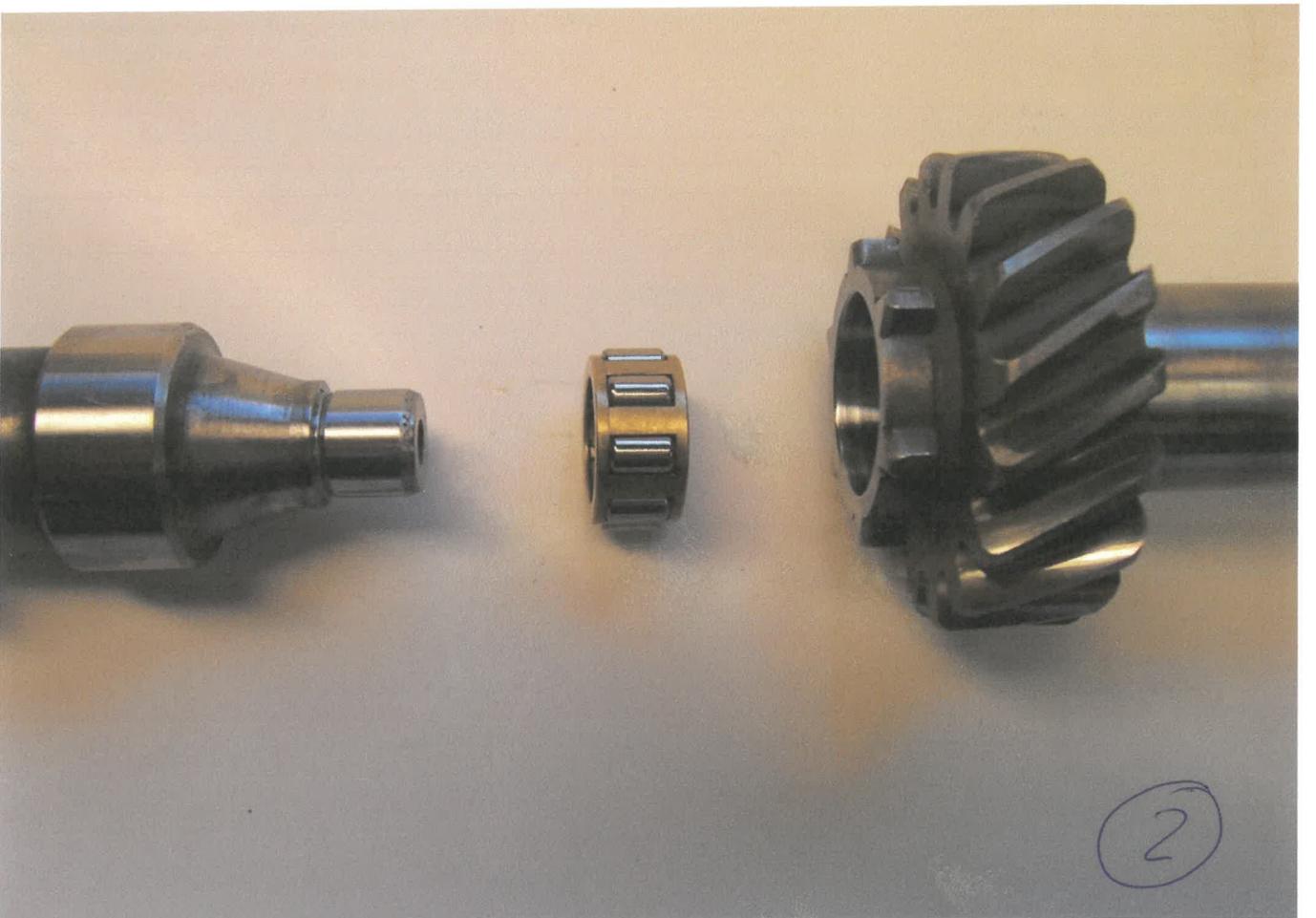
This cured the noise again and I have driven the Augusta about 5000 miles to this date. I hope it will last a bit more than that.

I am sure you will find the right solution for you gear box.

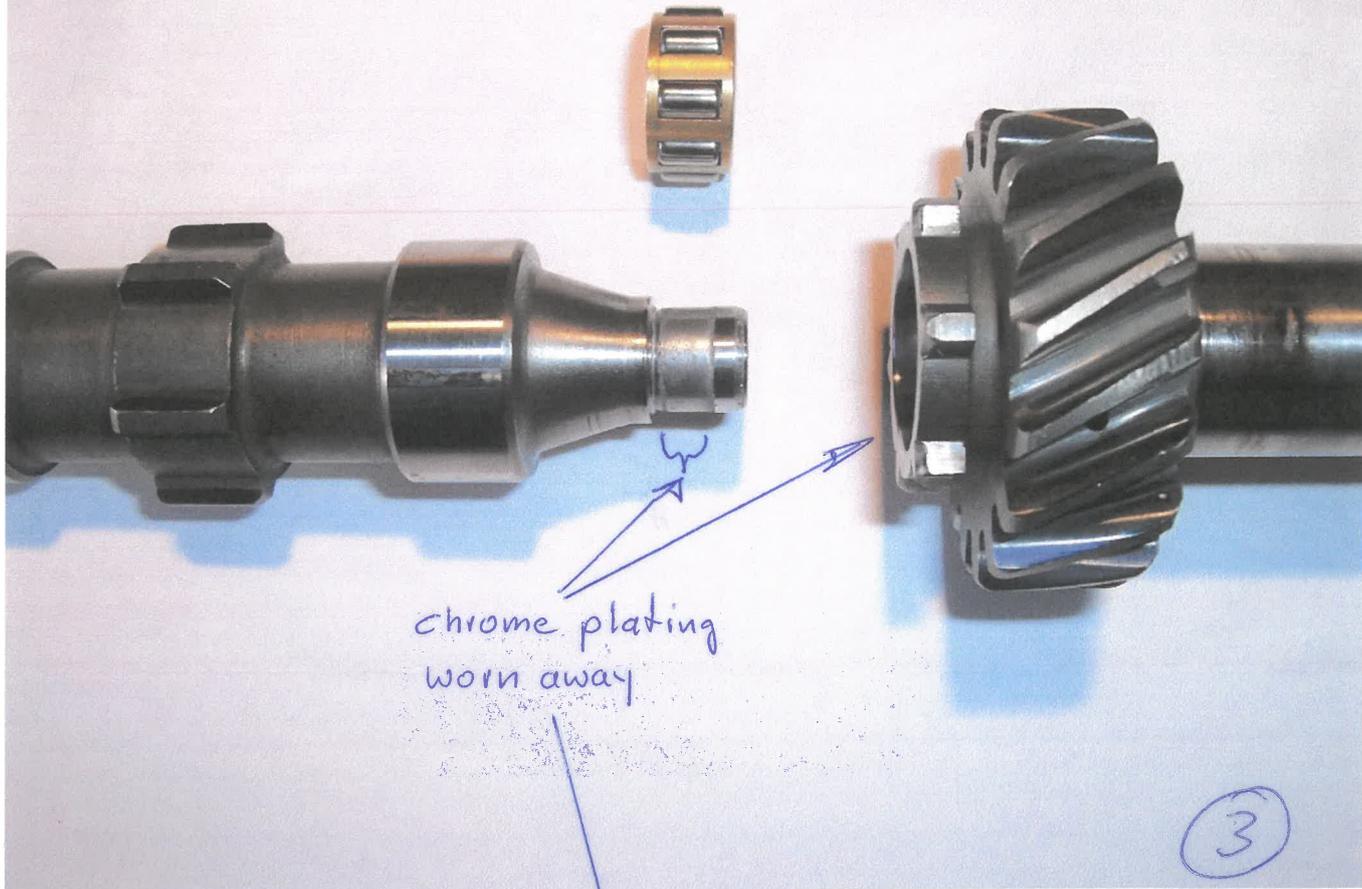
All the best to you both

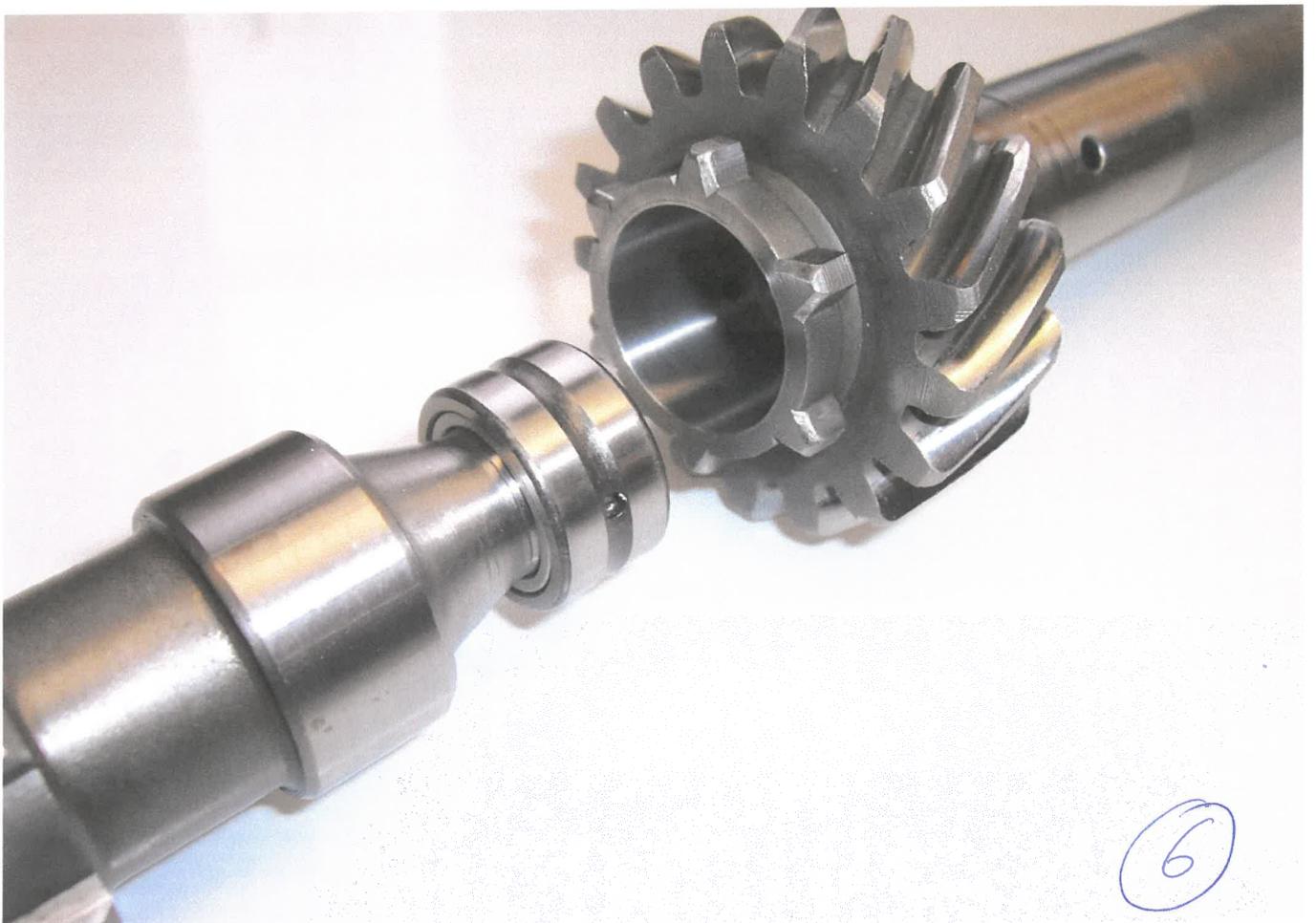
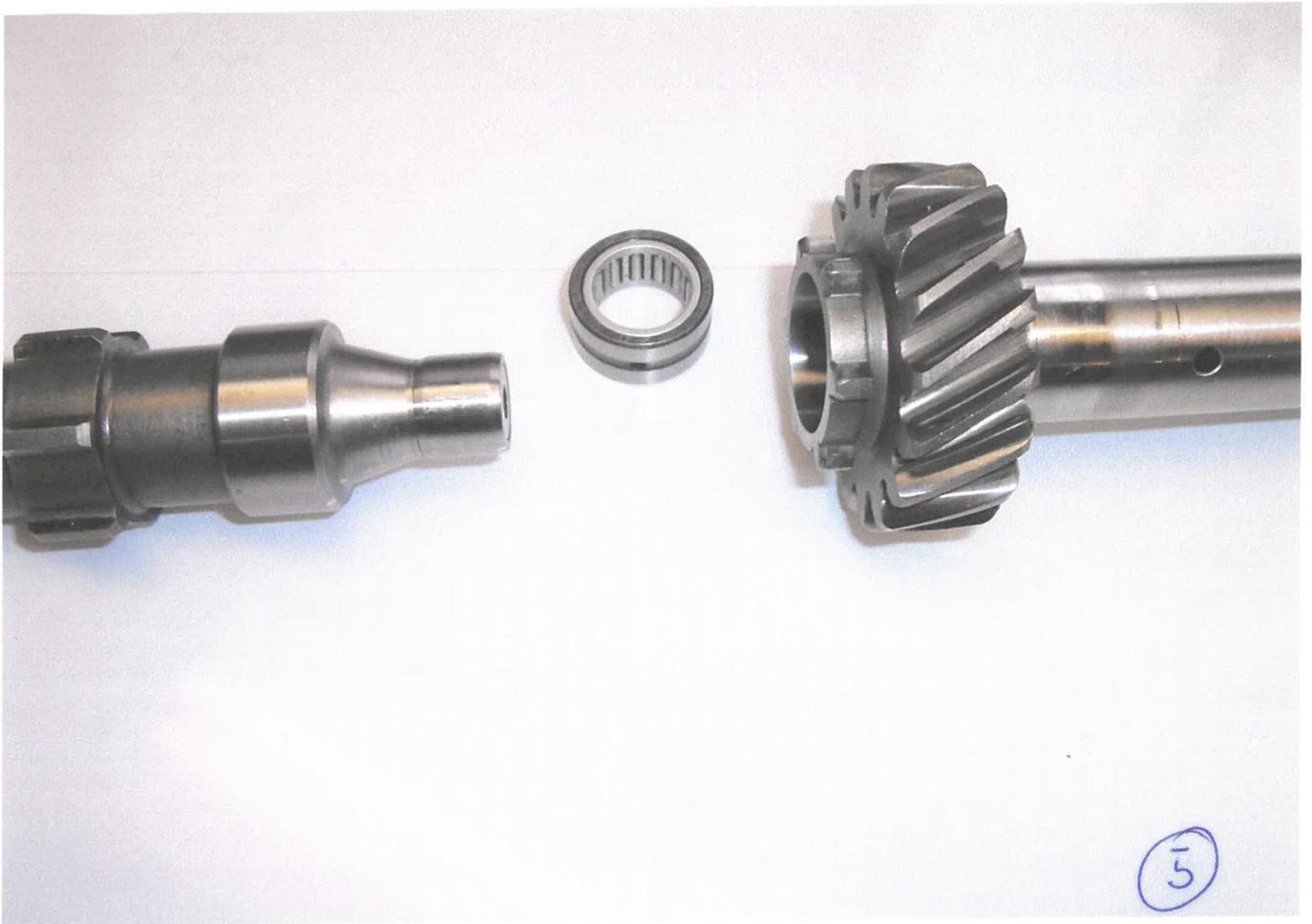
*beae*

The bearing cost is 35€, no need to pay until next Sliding Pillar



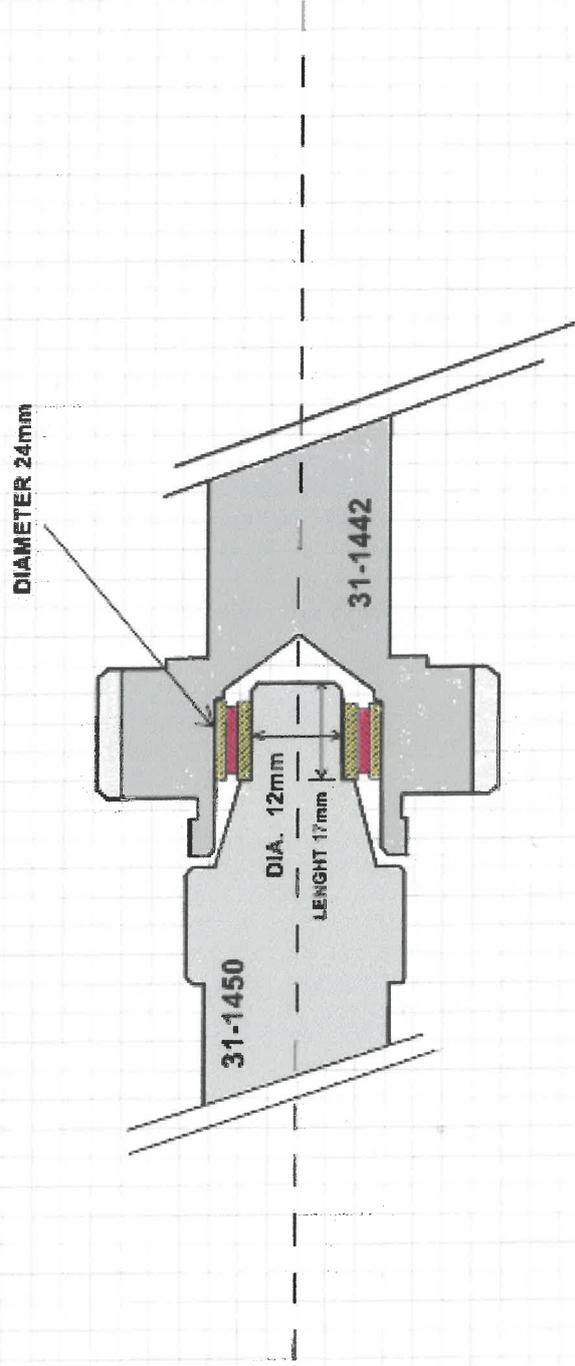
RIV 4184 LRT





# LANCIA AUGUSTA GEARBOX BEARING MODIFICATION

BEARING SKF NA 4901  
12 X 24 X 13 mm

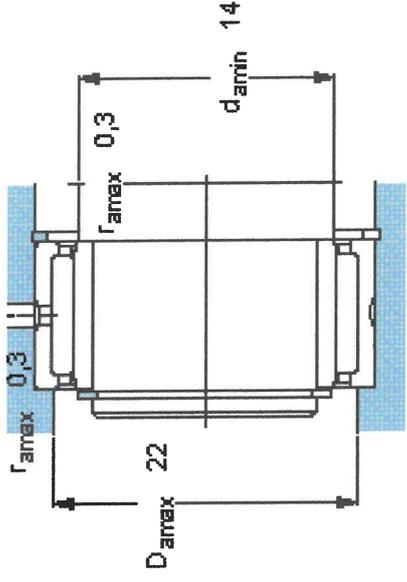
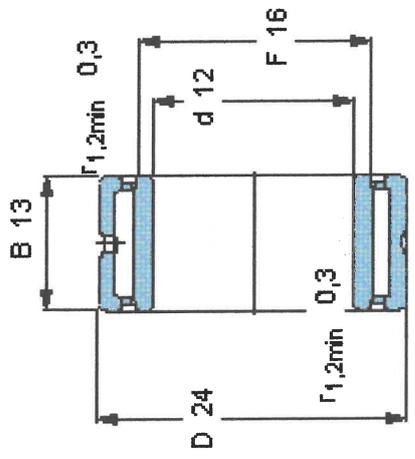


SOME DATA IS APPROXIMATE, VERIFY BEFORE WORK!

K. SAENGER 01.10.2006

### Needle roller bearings, with flanges, with an inner ring

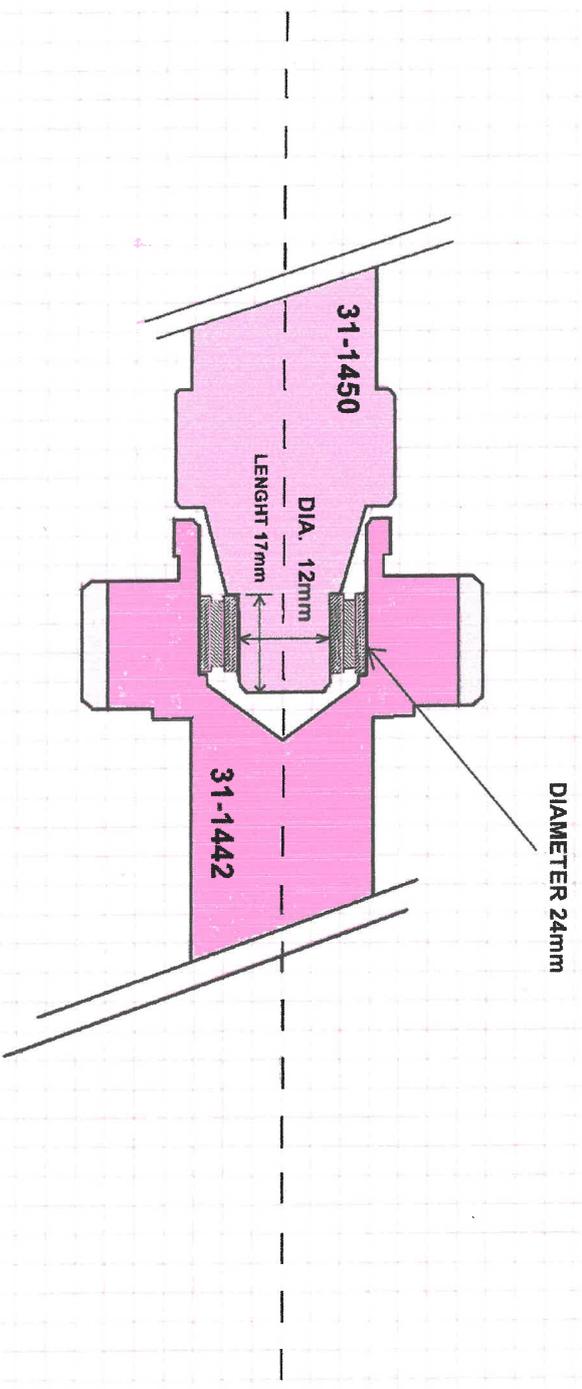
Principal dimensions	Basic load ratings			Fatigue load limit $P_u$	Speed ratings	Mass	Designation
	dynamic	static	Reference speed				
d	B	C	C0	kN	r/min	kg	
12	13	9,9	12,2	1,46	22000	0,026	NA 4901



Permissible axial displacement from normal position of one bearing ring in relation to the other:  
 $s \leq 0,5$

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