SCHAEFFLER

Schaeffler Global Technology Solutions

Automotive

Split Bearings slash Maintenance Cost of Bodywork Washer

The customer is a car manufacturer with 11 000 employees in Spain, who produces and sells approximately 400 000 vehicles a year. In 2008 the company's sales reached € 4.8 billion.

Challenge for Schaeffler

Bodyworks are cleaned in the bodywork washer before they are painted. The service lives of the rolling bearings installed in the washer were reduced by the operating conditions prevailing there. Every time a damaged standard bearing in the conveyor belt drive needed to be replaced, production had to be disrupted for at least four to five hours as it took a long time to dismount and mount the bearings. The customer wished to reduce these unplanned shutdowns of the bodywork washer significantly. Schaeffler's task was to simplify the replacement of the bearings.

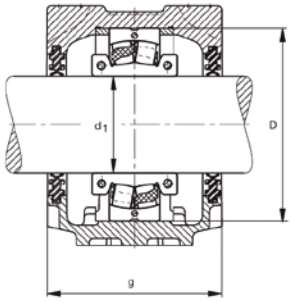
Schaeffler Solution

A very effective solution is to use split spherical roller bearings which, due to their special design, are very easy to mount. Schaeffler offers FAG split spherical roller bearings with matching housings especially for hard to access locations. Convinced by a product presentation the car manufacturer enlisted the services of Schaeffler Iberia to replace the bearings and housings in the bodywork washer conveyor belt drive. Experienced fitters replaced the conventional bearings with special plummer block housings with lip-type seals and split spherical roller bearings. Replacing these bearings requires only very short shutdowns. In addition, FRM140/12.5 rings were installed at the locating end. For this purpose, it was just necessary to modify the machine bed in order to adjust the shaft axis to the reference height.

Technical Information about the Plant
Machine location:
Bodywork workshop, Workshop 2
Machine:
SKIPS, bodywork washer conveyor return unit
Gearbox:
SEW 1,5 kW
Production capacity:
2 000 units/day
Production capacity (10/2009):
1000 units/day

LuK INA FAG

Special plummer block housing with lip-type seals and split spherical roller bearings



Bearings can be mounted as a locating or a floating bearing

FAG Split spherical roller bearing

Customer Benefit

By replacing the standard spherical roller bearings in the bodywork washer conveyor belt drive with FAG split spherical roller bearings and housings following advantages can be realized: The amount of work – and thus the necessary production disruption – is reduced significantly, which means a considerably increased productivity of the bodywork washer.

Time and production losses with standard bearings	
Downtime for replacing conventional housings:	approx. 4 to 5 hours
Production losses of each downtime:	150-500 bodyworks
Time and production losses with split spherical roller bearings	
Downtime for replacing split spherical roller bearings:	30 min
Production losses of each downtime:	80-180 bodyworks

Technical Information about the Solution
FAG plummer block bearing housings:
SNV140-L
FAG split spherical roller bearings:
222SM70-TVPA
Lip-type seals:
DH516
Rings:
FRM140/12,5
Bearing characteristics:
• Easy to mount and dismount • Easy to stock thanks to their modular design. The same housing size is suitable for different shaft sizes • High load carrying capacity

What's special

FAG split spherical roller bearings reduce machinery and plant downtime, resulting in significantly lower mounting costs. In many cases, split spherical roller bearings also permit considerable cost savings in the construction of new machines since they simplify mounting.

GTS 0066/ 01 / GB-D / 201309