

Bogus Bearings

BEAT PRICE AND LEAD TIME, BUT AT WHAT COST?

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Printed boxes waiting to be filled with domestic Chinese counterfeit bearings. Photo taken during police raid in China (all photos courtesy of SKF).

In a classic example of life imitating art—or is it the other way around?—while researching the issue at hand I was reminded of *All My Sons*, Arthur Miller’s 1947 play (based on true events) dissecting the ramifications of a businessman/family man supplying defective cylinder heads for WWII fighter planes, resulting in the death of 21 pilots.

Fast-forward sixty-some years and what do we have? Counterfeit bearings. Counterfeit bearings showing up in everything from elevators to aerospace components. When your \$100 “Rolex” falls apart on your wrist, well, what did you expect? But when bogus bearings find their way into safety-sensitive applications, lives are at stake.

How big is the problem? The Glen Ellyn, IL-based Bearing Specialists Association estimates that counterfeit transactions are a “\$600 billion a year problem which costs U.S. businesses \$200-\$250 billion annually, and is directly responsible for the loss of more than 750,000 American jobs.”

The jobs loss issue alone should command the attention of

state and federal government, affected industries and manufacturing in general.

To provide just a snapshot of how this typically goes down, a news item from the U.S. Customs and Border Protection (CBP) website reveals: “(Phoenix, AR-based) U. S. Customs and Border Protection import specialists seized counterfeit bearings with a domestic value of \$14,652 and an estimated manufacturer’s suggested retail price of nearly \$130,000 had they been genuine product.”

It should come then as no surprise that the counterfeiters don’t discriminate—any type of bearing is fair game—ball bearings, taper roller bearings, you name it. Indeed, bogus bearings have leached into the high-end, OEM precision bearing market, and are now ending up in wind turbine gearboxes or worse.

All of which is prologue for the following Q&A conducted recently with Stefan Lundin, SKF communications

continued

manager, group brand protection.

What distinguishes a counterfeit bearing?

The typical counterfeit bearing is a low-cost, no-name bearing that is marked with that of a premium brand to look like a premium bearing. The bearing is then packed in boxes that are copied from the original products, giving the impression of being genuine.

Another type of infringement is an old genuine bearing that is polished to look like a new bearing. This means that anything that is not what it looks like is a counterfeit.

How long has this problem been going on in the industry?

The modern bearing products have been subject to counterfeiting for quite some time on a smaller scale. The problem



Unmarked bearings waiting to be branded. Photo taken during police raid in China.



Counterfeit SKF and domestic Chinese counterfeit boxes waiting to be filled with counterfeit bearings. Photo taken during police raid in China.

has been escalating more rapidly over the last decade and really boomed in the last couple of years.

What is important to note is that counterfeiting is a criminal activity that does not lend itself to long time or detailed official records. This means that statistics involving counterfeit trade are estimates based on police, customs and other information. The official statistics are therefore only showing the tip of the iceberg, while the actual size of the problem only can be estimated.

Is price “enabling” this problem? What makes counterfeit bearings attractive to buyers?

It is important to understand that the end-users buy counterfeit bearings unknowingly and in most cases at retail prices, or just below. As in many other trades, it is the middlemen who profit from the trade. The counterfeit traders buy cheap counterfeit bearings and then sell them at a premium price.

Are the extremely long lead times for bearings another factor in the use of counterfeit bearings?

Definitely. Especially in the last few years before the economic downturn when demand far outstripped supply for a lot of bearing types and sizes. When lead times from premium manufacturers and their authorized distributors are long, time-pressed buyers scan the market for the products they need. Counterfeit bearings can be found for all the major bearing types and in many sizes. They can even be “made to order,” which makes it easy for counterfeiters to “produce”—i.e., whichever bearing of the right dimensions they manage to get their hands on, and which they can “brand” to what the customer is asking for. And it is one of the major factors in counterfeits finding their way to the open market.

In the absence of international bearing standards, what can be done to identify counterfeit bearings?

The main obstacle that we see is that the anti-counterfeiting solutions offered on the market are without a common standard. There are as many solutions as there are companies offering them. The major bearing manufacturers have their own systems for detecting counterfeit products, which for obvious reasons are kept secret as to avoid counterfeiters copying the identification method. As a customer it is impossible to tell the fakes apart from the genuine article, and the safest way to avoid counterfeit products is to source the products from known and authorized sources.

Are the bulk of counterfeit bearings coming from bearing retailers/agents?

Yes, and this is what makes it easy for the fakers. The manufacturers of the low-cost bearings used as the base in the fakes are doing nothing illegal. It’s the middlemen who then set up their operations with only the need of re-labeling material and counterfeit packaging. This can be done in any kind of small warehouse and can be easily moved around to avoid detection. There are also bearing traders who are completely Internet-based and can set up their operations virtually anywhere and anytime. One also need to be aware of the fact that there are authorized distributors and there are non-authorized dealers.

What are bearings associations like the Bearing Specialists Association (BSA), American Bearing Manufacturers Association (ABMA) and The Power Transmission Distributors Association (PTDA) doing to assist their members regarding this issue?

The WBA (World Bearing Association), where ABMA is one of the member organizations, is actively addressing the problem through the development of education and information campaigns. WBA also promotes legislative and administrative measures as well as engaging other key entities such as customs and other governmental authorities.

It is believed China is the major source of the counterfeit bearings. If so, why?

First of all, it must be said that the Chinese legislation and enforcement on IP (intellectual property) is good, in our opinion. SKF is also pleased with the way Chinese authorities handle counterfeit cases in general. If there are buyers, Chinese companies will come up with the products to sell. It is therefore not only a question of where the counterfeit bearings originate from, but also to where they are shipped and by whom. The answer to where the counterfeit bearings end up is—in most countries over the world.

As of this moment, China is the most prominent country of origin in all counterfeit cases we have dealt with so far. There are also counterfeit suppliers in India, and local “suppliers” are common in parts of Eastern Europe too. Estimates from official sources claim that Chinese counterfeit goods make up roughly 70% of the total counterfeit market worldwide. We have seen no reason to doubt these figures so far. As for the US market, nearly all seized counterfeits has been traced to Chinese suppliers.

What are some of the major problems that can result from counterfeit bearings?

Counterfeit bearings wear and tear like genuine bearings, only a lot more unexpectedly, and a lot faster. The counterfeit bearings originate from numerous different manufacturing sites and are of varying quality when they leave the factories. After being handled, or manhandled, during the branding process, the best that can be said about them is that they have unpredictable performance. This means that the amount of unexpected downtime will be a lot higher with counterfeit bearings. In some cases the performance of the bearings can be so bad it can cause damages to the applications they are in, and in worst case to the operators or members of the public as well.


Given the sometimes long production chain from bearing manufacturer to end user, how is it possible to track down the origin of counterfeit bearings that find their way into products?

It is really no problem as customers who have been cheated by counterfeiters are very keen on reporting the suppliers to law enforcement. In most cases, the name of the original supplier is given to the police when interrogating the suspects, or found during the police investigations.

Are bogus bearings showing up in high-precision applications such as wind turbines?

The counterfeiters make no distinction between what types of bearings they fake.

We have seen fake bearings of just about every dimension and type, and as one example the police have confiscated bearings that are typically used in the propeller shafts of oil tankers. Another even more horrific example is the occurrence of fake bearings found in tail rotors of Bell Helicopters, as informed by the FAA. (https://www.faa.gov/files/notifications/2007/Jan/UPN_2006-00097__1-18-07.pdf)

Recently we have also seen fakes of types typically used in elevators and construction cranes. 



Shipment of counterfeit bearings from China seized by US customs, John F. Kennedy International Airport.



Spanish national police inspecting counterfeit SKF bearings during a police raid.