



WESTWIND

The Dangers of Using Non-Genuine Parts

Westwind air bearings are produced with genuine components designed and produced at Westwind's factory in Poole Dorset. Westwind has been producing air bearings for over 30 years, and is the world leader.

In recent years a number of companies from America and the Far East have begun to offer imitation parts. These will reduce the working life of the spindle, reduce your productivity, and will lead to increased costs for your facility in the long term as spindles will require frequent repair.

Q – How can Westwind make these claims?

A – Because we have tested imitation parts in our spindles.

Case Study

We obtained an imitation front bearing, rear bearing, thrust plate and collet. The components were built into a Westwind D1331 spindle (125,000 rpm), which was then tested to the same specification as genuine Westwind spindles. The results were alarming.

Six major specifications could not be achieved, **including axial and radial load tests** which are critical to ensure successful drilling over a long time frame. Spindle air flow was erratic and dynamic runout figures were more than 20 microns.

The parts looked satisfactory when inspected visually, but were poorly finished, and had many dimensional errors. We decided to run the spindle and monitor its performance. The spindle :-

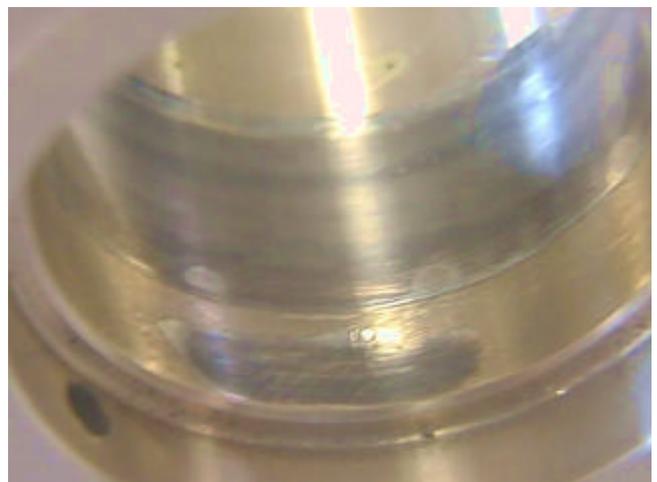
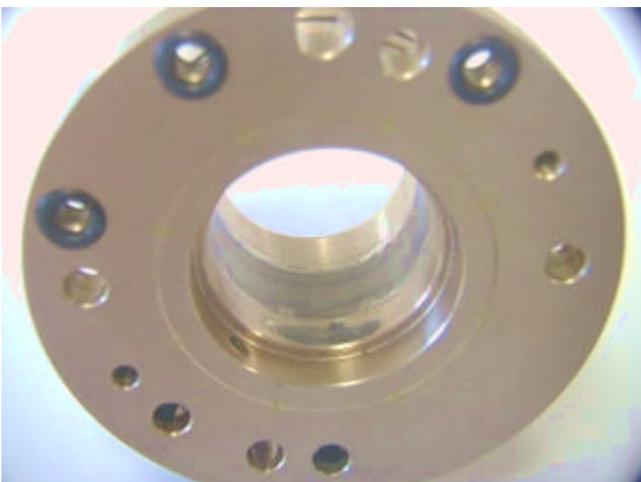
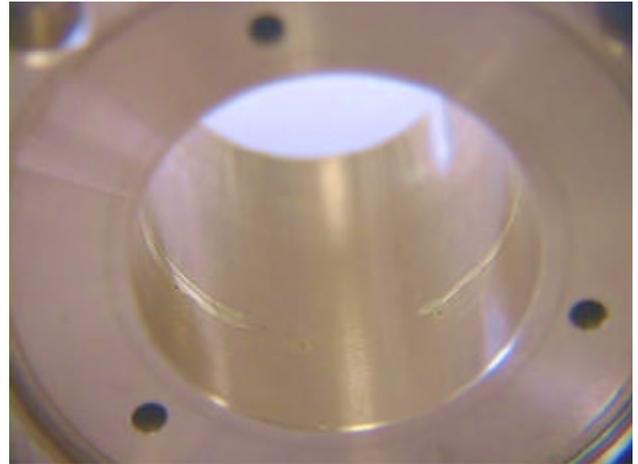
- **Failed within one day**
- **Consumed 40% excess current**
- **Exhibited increased slip**
- **Shaft speed could not be properly controlled**
- **Air flow was 35% below our specification**



Genuine Westwind Spindles

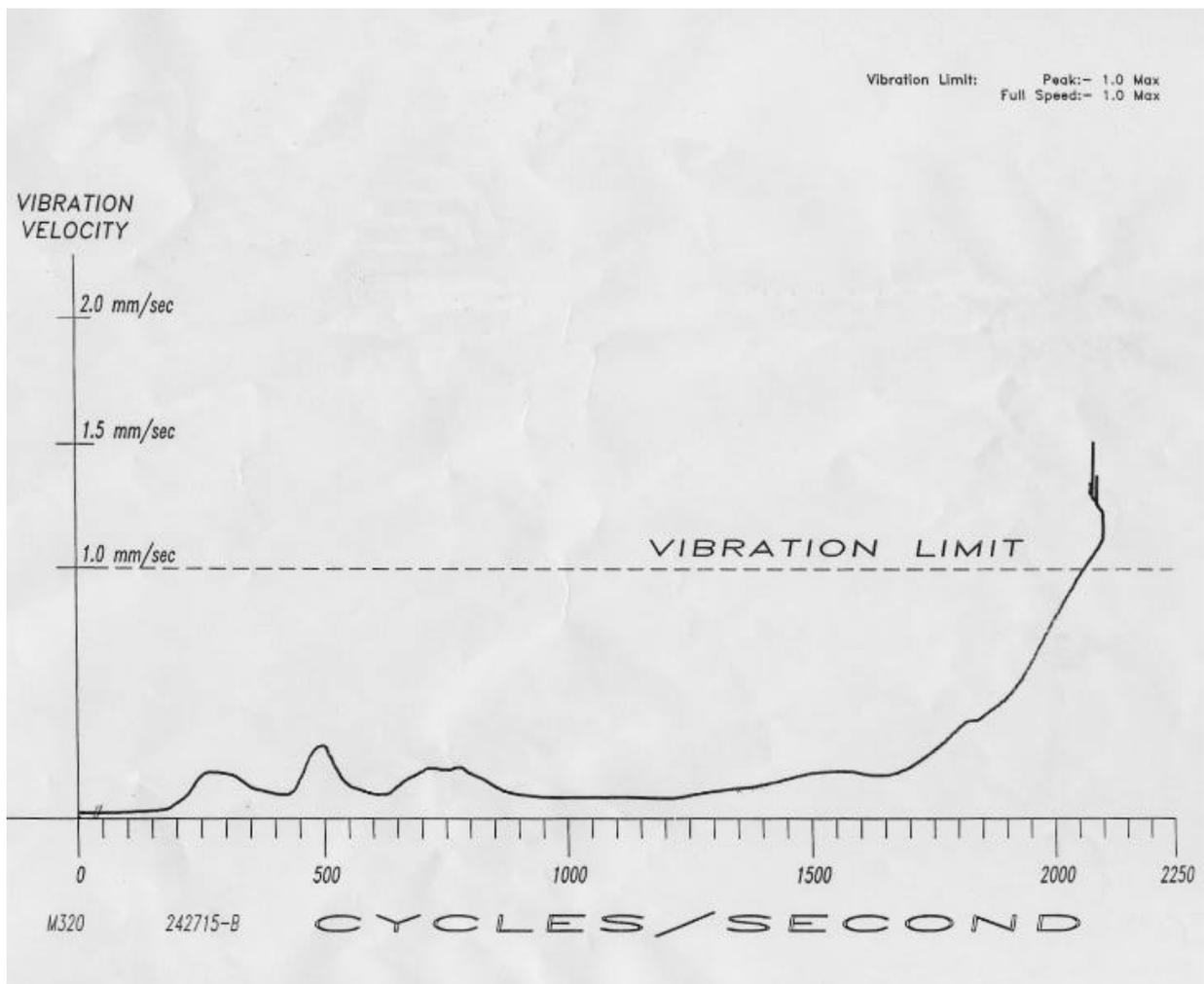
The spindle seized (Note – the spindle was run without loads, which would be applied during normal drilling), and we show the resultant component damage in images on the following pages.

Any spindle repaired with these parts would operate far outside of the specifications laid down by any OEM, and it is likely that it would fail almost immediately even without any load. In addition, the rapidity of the failure witnessed at Westwind raises safety concerns for operators or repair technicians.





The parts pictured above show the damage sustained during operation and seizure of the spindle.



The vibration trace pictured above shows the vibration of the spindle as it was run up to full speed. The trace was aborted when the spindle seized, at the point where the trace goes vertical.

Summary

Westwind air bearings are the fastest drilling spindles in the world, produced to exacting specifications. We have a network of audited, and authorised service centres around the globe (see a full listing on our website www.westwind-airbearings.com, or contact your nearest Westwind office).

Failure to use genuine parts at Westwind repair centres will reduce the quality of your drilling, and will lead to spindle failure. Imitation parts will give;

- Reduced radial loads.
- Reduced axial loads
- Incorrect air flow
- Higher runout figures
- Increased current and motor slip
- Faster spindle failures
- Increased costs

To maintain quality, productivity and peace of mind, use genuine Westwind parts from the world leader.

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