



# *Refurbishment Service*





## Introduction to Westwind

With over 40 years experience and a unique knowledge of the PCB industry, Westwind is universally recognised as a world leader in air bearing spindle technology. Westwind spindles are precision-engineered components, requiring careful maintenance and servicing to guarantee outstanding performance and long life. Your choice of service partner is important to ensure the best performance from your Westwind spindles.

## Westwind Refurbishment Centre

Westwind Air Bearings has demanding standards for spindle refurbishment and repair. Westwind's dedicated spindle rebuild department is staffed by experienced engineers, fully trained in using Westwind approved equipment and procedures.

Westwind carries out spindle rebuilds on most popular models. To ensure enhanced performance and extended working life, choose Westwind for all your spindle requirements.



## Guidelines for Refurbishable Parts

Due to the close tolerances required in air bearing spindles, it is not always possible to repair all parts. However, in the case of minor damage, some parts can be refurbished by Westwind.

The photographs below illustrate damage to thrust plates, bearings and shafts, some of which can and cannot be refurbished.

### Parts that can be refurbished

#### *Shafts*

For shafts fitted to spindles operating at speeds up to and including 180,000 rpm.

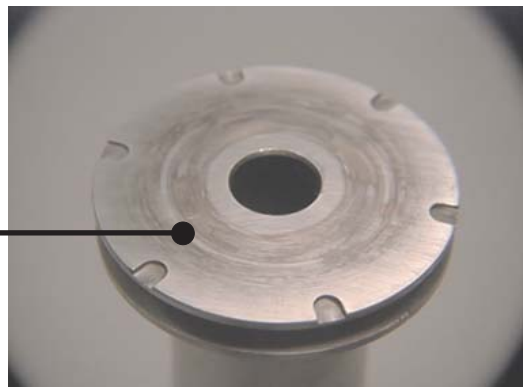
Light taper damage can be repaired.



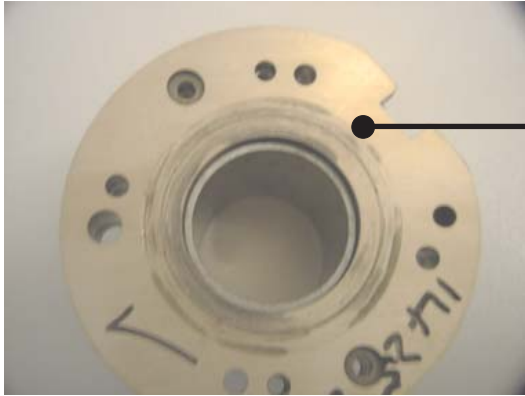
Journal damage caused by seizures.



Damage to thrust faces and runners.



## ***Bearings***

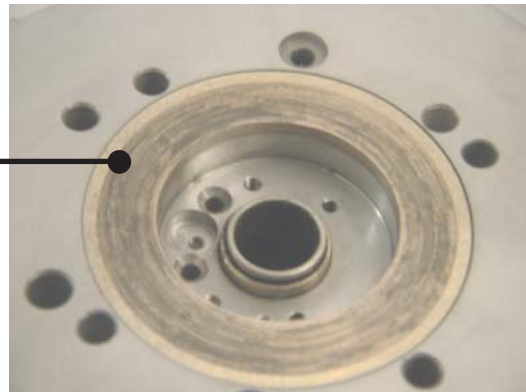


Bearings on spindles operating up to and including 125,000 rpm.

Light bore damage and thrust face damage where material removal does not exceed 0.00005" on bearing bores and 0.004" on faces.

## ***Thrust Plates***

Thrust plates with light surface damage.



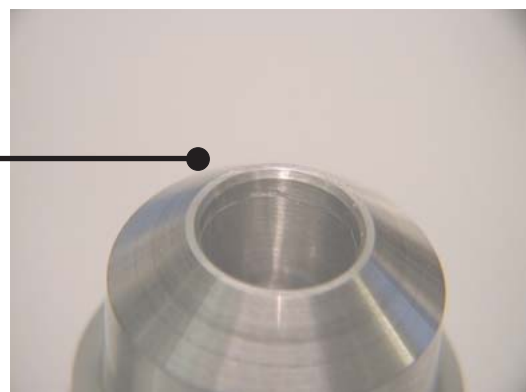
## **Damage that cannot be refurbished**

In some cases it is not always feasible to refurbish an existing part and, in these instances, a new Westwind spare part will need to be purchased:

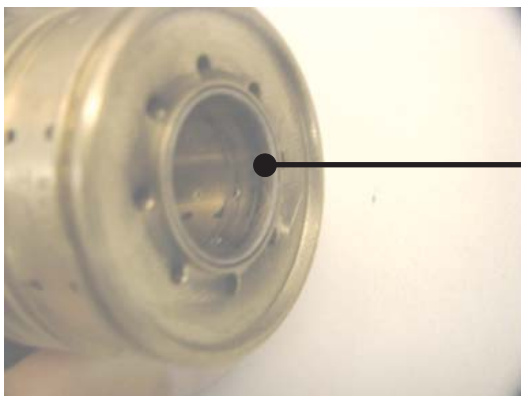
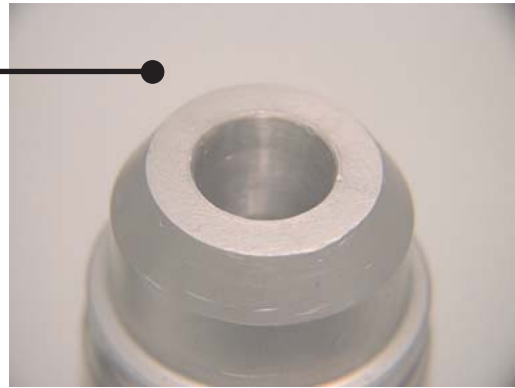
## ***Shafts***

Shaft tapers with damage more than 0.002" deep.

Journal damage on shafts operating above speeds of 180,000 rpm.



Nose damage on shafts, including cracking.



### ***Bearings***

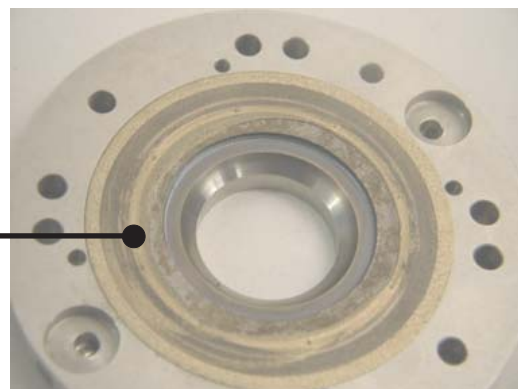
Bearings that have suffered seizure with deep grooving.

Bearings that have bore sizes above 0.00005" of top size limit.

Bearings that have serious damage on the D.U.

### ***Thrust Plates***

Thrust plates that have suffered erosion and would require a new D.U. bush.



If you have any queries regarding the feasibility of your repair or would like to know more about Westwind's extensive refurbishment service, please email Westwind Repairs at: [support@westwind-airbearings.com](mailto:support@westwind-airbearings.com).

## Additional Support Services

Westwind's unique aftersales programme ensures minimal machine down time and spindle maintenance. With an extensive network of worldwide technical support, close to the user, Westwind provides the most comprehensive level of service in the PCB industry.

### *Spindle Repairs*

Demanding standards for spindle repair and maintenance ensure every Westwind spindle is repaired to original specification. For a complete up-to-date list of Westwind Authorised Service Centres, visit [www.westwind-airbearings.com](http://www.westwind-airbearings.com).

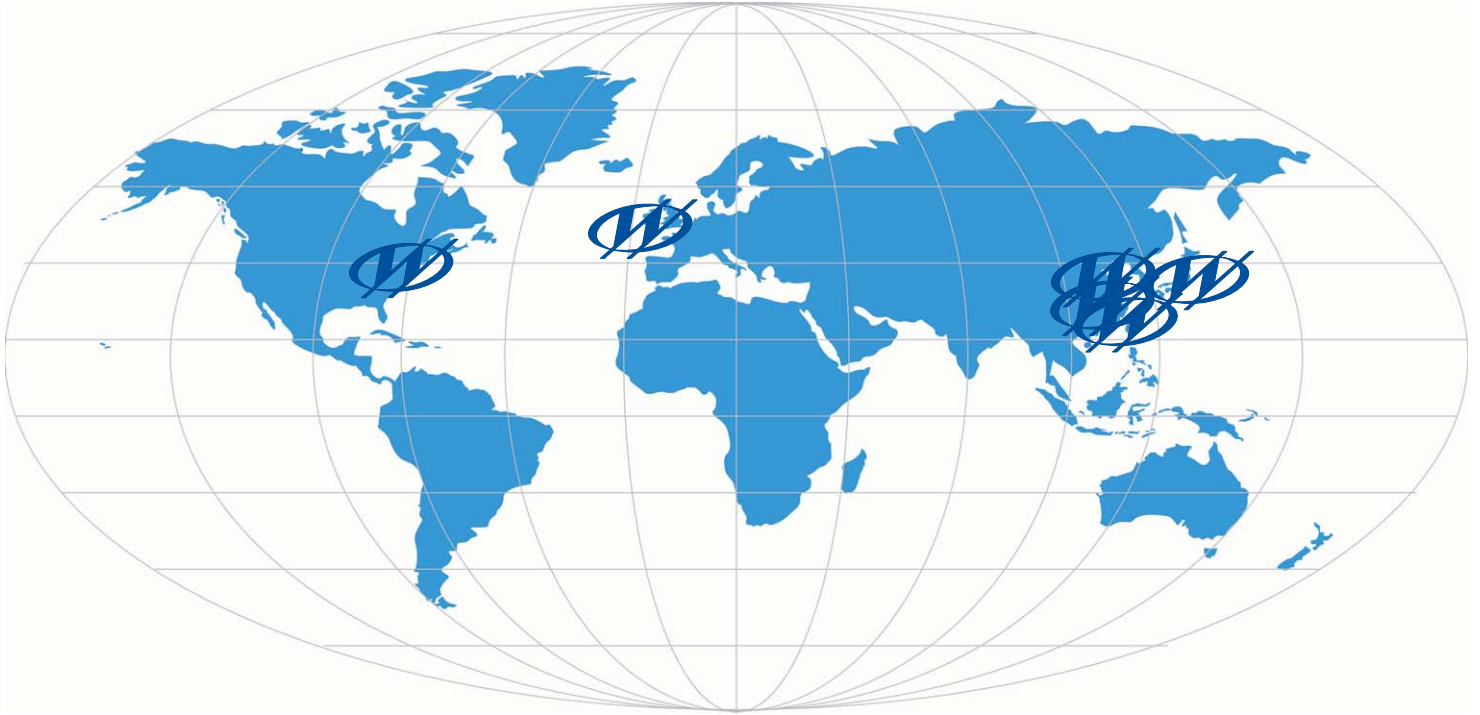


### *Spare Parts*

All Westwind spare parts are manufactured from quality components for spindle accuracy and precision. Use of non-Westwind components can result in unacceptable performance and premature spindle failure.

### *Collet Maintenance*

Collet maintenance kits and torque test kits are available, specially designed to set the collet correctly and for checking collet torque. In addition, collet maintenance instructions for dead stop, positive lock and bonded type collets are also available.



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