

# Overview of the repairs grading structure

#### What is the purpose of our grading structure?

The units we receive from customers for repair are varied in type, condition and OEM manufacture. From simple three way (or less) power slip rings to complex power and signal transfer units.

As well as the complexity of the units we also need to consider the quantities of such units being submitted. Typically we may see hundreds of some types of power slip rings over a year, conversely we may see some types of units submitted as individual pieces on an infrequent basis.

The OEM manufacturer also has an impact on the repair we can offer. Generally, if we are repairing a BGB manufactured unit, spare parts and technical back-up are readily available, even on relatively old designs. If this is the case then we can be reasonably confident of both

the feasibility and cost to repair. This allows us to be more specific regarding the most suitable repair processes and associated costs. We can use this to benefit both ourselves, in reduced labour and spares costs, and our customers in reduced repair costs.

So we have developed a repairs grading structure for many of BGB's units, we are also expanding the grading system to encompass a growing number of the more common non-BGB OEM parts. For graded repairs we generally have access to all the spare components we are likely to need, meaning we are able to commit to repairs, offering exceptional turnaround times.







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### **Outline of the grading structure**

(power units only and dependant on type):

After an initial period of failure mode data analysis combined with an active process progression, BGB felt able to offer our customers a structured repair offering for many of our own products. This would be a three tier offering, grades one to three. Initially offered on power slip ring units.





Grade one; Assessment of the overall condition, a simple clean up, skim the ring diameters, rebalanced, fully tested, packed and dispatched.



**Grade two**; Assessment of the overall condition, again we can re-use the existing moulding, repair any damage to insulation barriers, replace the ground ring if applicable, skim the ring diameters, rebalanced, fully tested, packed and dispatched.



Grade three; Assessment of the overall condition, this is a significant repair, a new moulding is fitted to the existing hub, new ground ring where applicable, top shroud where applicable, machine all diameters, fully tested, packed and dispatched.





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## **Outline of the grading structure**

(combined power / signal units and dependant on product type);

This required a different approach due to the huge variation in model types (and variants) from multiple OEM's. Due to the lower quantities and lack of technical data, analysis of failure modes would be, and still is, more challenging. Again, BGB products were tackled first and a three grade system has been established for the most common units. Moving on from this we are now developing repair solutions for an expanding portfolio of OEM units, focusing on models where we see significant demand in the marketplace, we are aiming to have a structured graded repair offering in place.



Grade one; Assessment of overall condition, a simple clean up externally and internally, fully electrically tested, packed and dispatched.



Grade two; Assessment of the overall condition, we aim to re-use as many of the original components as possible, repair any damage to insulation barriers, replace minor service components if there is significant wear or damage, check integrity of seals and replace if required, fully electrically tested, packed and dispatched.



Grade three; Assessment of the overall condition, although we aim to re-use as many of the original components as possible this is a significant repair, most serviceable components would need replacing: brushes, brush rings resurfaced if required, bearings seals, wiring looms, a complete strip down of the unit is usually unavoidable. Unit is rebuilt, fully electrically tested, packed and dispatched.





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## **Ungraded repairs:**

We do offer a repair service for more uncommon or complex units, this is done by careful assessment and costing. A fixed price quotation is offered for the repair, this type of repair does usually involve more technical sourcing of components or even remanufacturing parts, so tends to have a longer lead time. Each unit we deal with in this way grows our expertise and increases our technical knowledge so is a valuable exercise on several levels.



#### **Unrepairable units:**

Every unit we see coming through the repairs business is thoroughly assessed to establish its potential for repair, unfortunately it is often the case that spare components are impossible to source or a repair is commercially unviable for ourselves or the customer. In some instances we may be able to offer an alternative new unit.

If we are unable to facilitate a repair and the unit is effectively beyond recovery we can either return the unit to the customer or dispose of it ourselves in an environmentally responsible manner. Units that are scrapped are diss-assembled with recyclable materials separated out and dealt with in line with our circular economy and environmental policies.

