

# Component reconditioning.

SBB Passenger Operating – your partner for component reconditioning.



# SBB Passenger Operating.

## Reconditioned components as good as new.

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**Rolling stock is subject to a variety of stresses during day-to-day operation. As a consequence, the various components on the coaches gradually wear out. Regularly replacing components with as-new parts is absolutely essential to ensure that coaches are both available and safe.**

So that the task of exchanging parts can proceed smoothly, the replacement parts need to be available at the right time and in the right quantities. As an alternative to purchasing new replacement parts, SBB Passenger Operating has the necessary expertise to recondition worn components.

### **Our services.**

By reconditioning removed components, we can restore technical systems and assemblies to their previous condition. Once the coach arrives in the workshop, the components are removed, cleaned and disassembled. The second stage is to analyse the sub-assemblies and the technical systems. Based on the analysis results, the components are then reconditioned in our Bellinzona, Biel, Olten and Yverdon workshops. These reconditioned components are of the same quality as new replacement parts. Reconditioning is complete once the part has been refitted and tested.

### **How you benefit.**

Reconditioning components offers you an attractive financial alternative to the procurement of new parts. The experience we have gained from reconditioning also allows us to continuously improve the products and to optimise the maintenance intervals. Your coaches will benefit from improved availability rates.

### **Why choose Operating as a partner?**

- The maintenance specialist with the best price/performance ratio for coach, freight wagon and locomotive components
- Excellent, proven expertise in the reconditioning of a wide variety of components
- Complementary services such as component exchange, component management, logistics
- ISO 9001 quality management system certification
- ISO 14001 certification of environmental management systems
- OHSAS 18001 (Occupational Health and Safety Management System) certification
- Non-destructive testing certification to EN 473/ISO 9712
- Welding certification to ISO 3834-2, DIN 6700 and EN 15085-2 at the Olten, Yverdon, Bellinzona and Biel workshops
- Regular internal audits carried out by our specialised Risk, Safety, Quality and Environment unit
- Regular external audits carried out by the Swiss Association for Quality and Management Systems (SQS) and the Federal Office of Transport (FOT)
- ECM certification of the maintenance functions carried out at the Bellinzona depot in accordance with EU Ordinance No. 445/2011
- We were awarded the Prix Esprit prize 2014 for the basic concept of 'Managing with vision, inspiration and integrity'



# Component reconditioning.

## Our full service portfolio at a glance.

### **Our component reconditioning services.**

We recondition components and systems for multiple units, articulated trains, locomotives, passenger coaches and freight wagons in SBB Passenger Operating's own works. Following reconditioning, the parts can be used in exactly the same way as new parts. We have a broad product portfolio. Some of the components we can recondition for you are listed below:

### **Powered and trailer bogies.**

- For multiple units, articulated trains, passenger coaches, freight wagons and locomotives

### **Hydraulic components**

- Reconditioning and inspection of shock absorbers, yaw dampers and Cursator suspension units

### **Engines and motors.**

- Reconditioning and refurbishment of traction motor and auxiliary motors, depending on their condition
- Diesel engines
- Engine inspection in accordance with manufacturers' specifications

### **Pneumatic and electropneumatic components.**

- Compressors
- Brake valves
- Brake and servo cylinders
- Electro-mechanical valves

### **Mechanical components.**

- Mechanical brake units
- Electro-magnetic rail brakes
- Axle box bearing inspection, reconditioning and inspection in accordance with manufacturers' specifications
- Running wheel sets and driving wheel sets. We can carry out every maintenance stage from reprofiling to full wheel balancing and non-destructive testing
- Drawgear and coupling reconditioning
- Passenger coach running gear
- Door leaves and drive motors
- Seat reconditioning including complete re-upholstering

### **Coach air conditioning system maintenance.**

- Reconditioning of coach air conditioning systems

### **Electrical/electronic components.**

- Train control systems such as ETCS and ZUB
- Traction, control and regulation electronics
- Converters
- Transformers, current collectors and power electronics

### **Reconditioning of vacuum WC systems.**

- For closed vacuum WC systems with a tank or bio-digester, we carry out incoming inspection, replace assemblies as necessary and submit the complete system to final inspection.



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