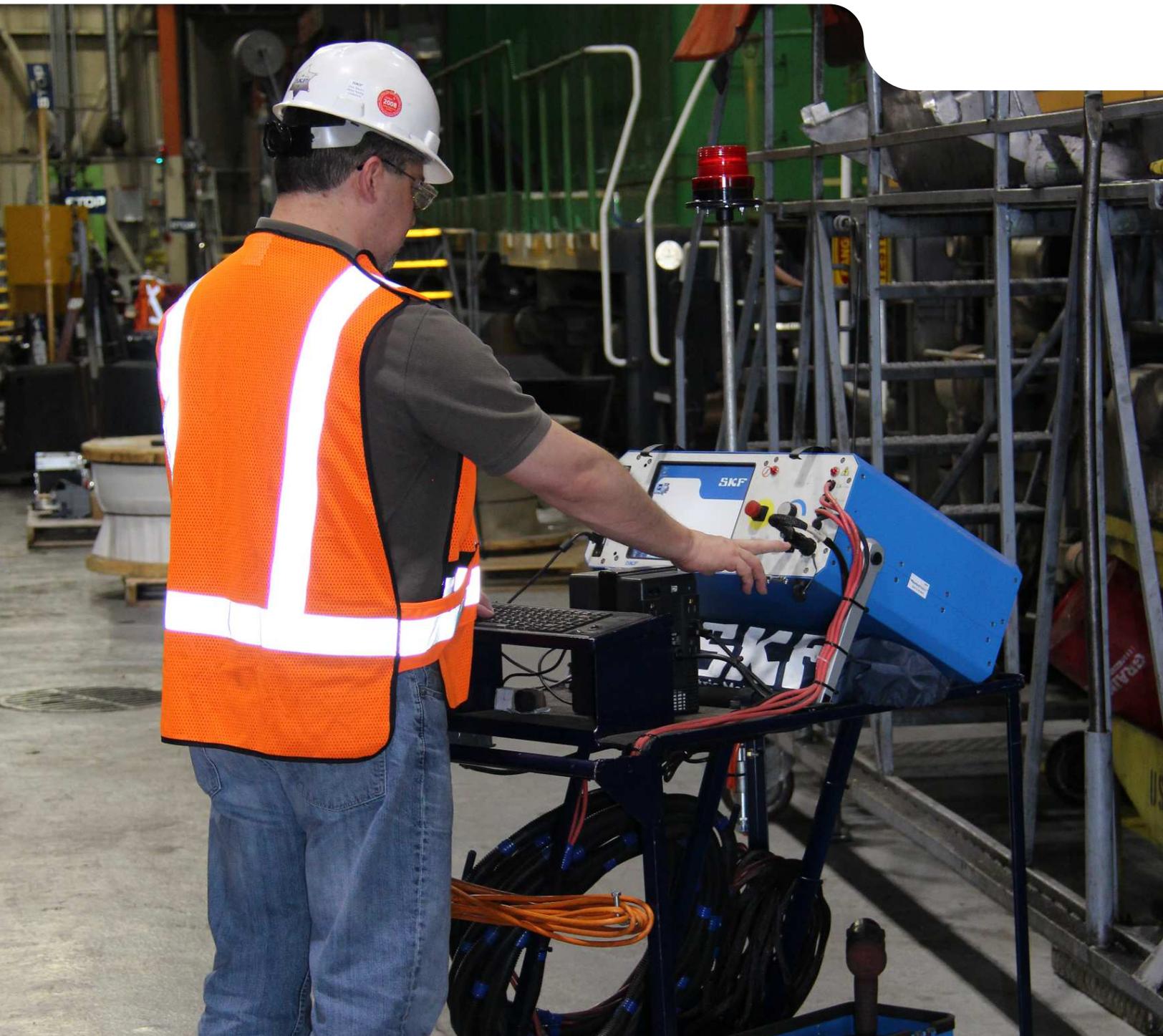


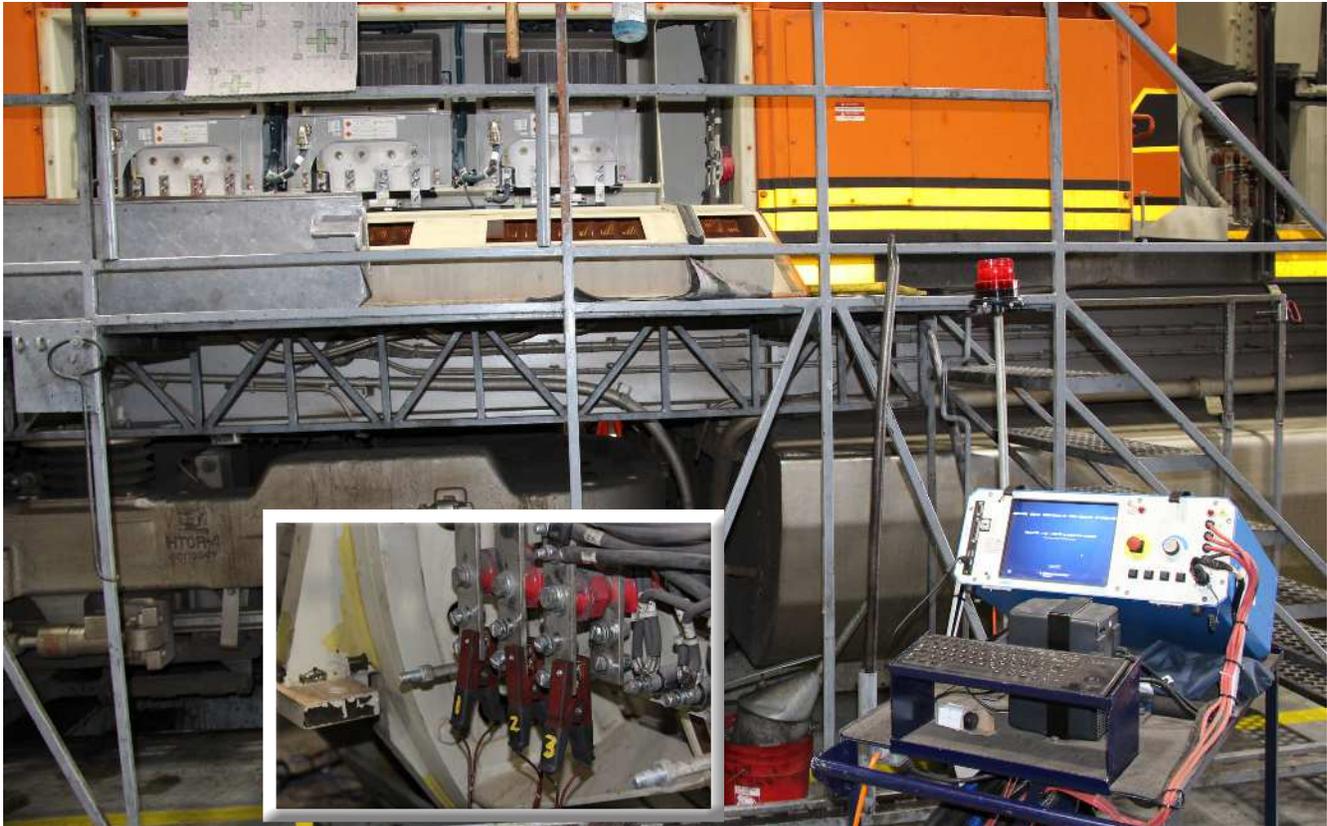
Locomotive Motor Testing

Advanced solutions for detection and correction of locomotive traction motor problems



Minimized locomotive downtime = reduced costs

Traction motor failures can be costly. The costs of unplanned downtime and motor repair or replacement can be extreme, even to the point of damaging relationships with customers (loss of business). Motor failures can also precipitate failures in other parts of a locomotive, such as the phase module drives for AC traction motors. SKF has AC and DC traction motor test solutions that completely evaluate the condition of the motor to deliver the high reliability and reduced costs necessary to stay competitive.



The SKF Static Motor Analyzer – Baker AWA-IV is used for testing AC traction motors in locomotives in maintenance and repair depots at leading railway companies throughout the world.

AC traction motor solutions

The SKF Static Motor Analyzer – Baker AWA-IV performs comprehensive, fully-automated testing of AC traction motors. These tests are performed in maintenance depots and repair shops while the motor is de-energized.

The Baker AWA-IV consistently and reliably executes each test in exactly the same manner. Test results are compared to preset, user-defined test limits to eliminate guesswork or misinterpretation of results. This consistent, repeatable automation eliminates potential variations between different users or variations in test processes.

For larger-scale fleet maintenance, the Baker AWA-IV can be pre-programmed with a specific maintenance job process flow. This programming can include items such as job safety requirements, photographs of proper motor connections for testing, instructions for changing test environments (e.g., wetting motor feeder cables) and even specific best-practice troubleshooting for exact isolation of problem components. To ensure consistency across multiple test depots, these test configurations, job processes and troubleshooting flows can all be controlled from a central location.

In this configuration, the Baker AWA-IV automatically updates local test programs to match the central master program. This ensures each and every test depot executes identical tests with the same parameters and process to yield continuous improvement, and consistent results. Test data is stored to the central location for analysis, and if necessary, for test and process improvements.

DC traction motor solutions

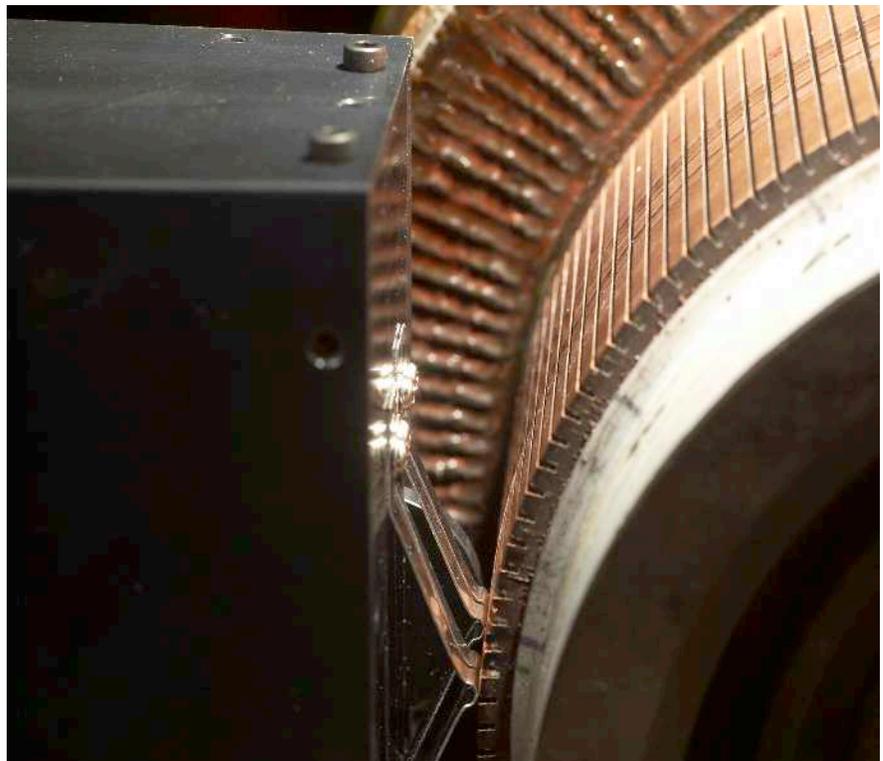
Tests on DC armatures can be error-prone due to the repetitive nature of testing several hundred commutator bars that require good electrical connections for each test. That cumbersome, error-prone process is eliminated with the Baker WinTATS Traction Armature Test System. Baker WinTATS performs a comprehensive array of tests with an automated armature test fixture.

With the use of an innovative optical alignment system, the system fixture precisely rotates the armature to perform tests on each armature bar. Each armature bar is surge tested for optimum diagnostic information. The system compares all measured test values against user-programmable test limits to yield consistent test pass/fail results. The Baker WinTATS system can update its programs and store test results in a central location for consistent testing across all test depots and continuous test process improvements based on actual test data.



The SKF ATF5000 accessory works with SKF static motor analyzers to quickly and accurately test traction motor armatures.

For low-volume DC armature testing, the Baker DX15A Static Motor Analyzer offers a surge mode tailored for armature testing. This mode includes conditioning the surge signal for low impedance armature bar to bar testing for superior diagnostics, automatic incrementing of bar numbers and automatic comparison to a reference surge waveform. Probing the armature is simplified with the ATF5000 armature test fixture, which holds precise test lead spacing in an ergonomic package.



The SKF Static Motor Analyzer – Baker WinTATS traction armature test system uses an innovative proprietary fixture with a precise optical positioning system that is faster and more accurate than manual testing of armatures.

Maximizing locomotive uptime while reducing motor failures and costs is a major challenge for railway businesses. SKF traction motor test solutions help overcome these challenges. For more information on how SKF can help reduce traction motor maintenance costs, contact SKF today.



www.skf.com/emcm

SKF USA, Inc.
Electric Motor Condition Monitoring
4812 McMurry Avenue, Fort Collins, CO 80525
Tel: 970-282-1200 salesEMCM@skf.com

© SKF is a registered trademark of the SKF Group.

© SKF Group 2016.

The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of the use of the information contained herein.

PUB CM/S1 16960 EN · October 2016