



# FLEXIBLE TESTING AND SIMPLIFIED SOFTWARE HELP MOTHERSON SAVE TIME ON LARGE ASSEMBLIES

Motherson is one of the largest manufacturers of wiring harnesses and electrical components globally and is a significant supplier to the transportation industry. The Derby (UK) site specialises in large, complex assemblies for rolling stock.

## THE SITUATION

Motherson were previously using equipment which only provided basic measurements and incurred high set-up times due to a lack of versatility. Test reports were still being printed on a dot matrix printer at this time due to the age of the equipment.

New contracts were won and the volume of the expected work was too great and costly to continue testing with the existing equipment and methods.

The requirement was for a system that could test large assemblies, including functional testing of relays, LEDs etc and have flexible, easy to use software. The ability to test up to 1500v AC was also required and was lacking with the existing equipment.

### INDUSTRY:

Wire harnesses and assemblies for rolling stock.

### REQUIREMENT:

Testing of large assemblies; functional testing; flexibility; user-friendly software; digital reporting; HV AC capability

### SOLUTION:

Automeg M2000 - harness test system with multibus functional testing

### BENEFITS:

Cost & time savings; flexibility of combined testing; programmable user instructions; integrated HV testing; simple UI for programmers and users.



≈9 hour  
reduction

in test time  
on larger  
assemblies



"The greatest strength of the M2000 is the flexibility it provides when testing a diverse range of assemblies.

Powering any test point from the PSU means the set up is easier and requires less detailed planning."

*Nathan Bramson - Test Engineer, Motherson*



### THE PROBLEM

Using old methods of testing posed several challenges. Using small machines to test large assemblies meant frequently changing the interface leads, resulting in high connect/disconnect times.

Components and high voltage testing needed to be set up on separate equipment. Additionally, program creation was a slow process which had to be carried out at the test system.

### THE SOLUTION

Motherson's partner company recommended MK Test Systems as a potential solution. Endorsement from a current MK user gave Motherson the confidence to purchase an Automeg M2000 system.

### THE RESULTS

#### Multiple tests on a single system

Motherson now have a flexible test system which performs all tasks which previously had to be undertaken separately. This has resulted in a notable reduction in test throughput times;  $\approx 9$  hours on one of the larger assemblies.

Applying HV 2500DC and 1500AC means assemblies can also now be tested on the same test system, unlike the previous method.

The ability to power components using the external PSU and test continuity of the wiring is a major benefit. Switches and illuminated buttons can now be tested easily, with the ability to program user inputs and instructions.

#### Simpler software for programming and operating

Engineering time has been greatly reduced due to an easier to use programming interface of the Gen3 software, MKAT. The separate 'Editor' software means that test programs can be created and edited away from the system.

Gen3 software has also made testing for users much easier with the improved UI. Test reports are saved automatically in PDF or XML removing the need for printing test results.

### ABOUT US

MK Test Systems have been a leading manufacturer and supplier of automatic harness testing systems since 1991. Many of the world's leading aerospace, defence, and rail companies rely on our systems to test their products.

We have successfully designed, delivered and implemented over 3000 electrical test systems into 34 countries and have built an enviable reputation for excellence in Automatic Test Equipment (ATE) solutions and the way in which we support our customers.

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