

Panel Presentation: Perspectives on TRM Training for Maintenance - Johnson

William B. Johnson, Ph.D.

*Galaxy Scientific Corporation
Atlanta, GA*

HUMAN FACTORS IN MAINTENANCE COURSE*

A human factors in maintenance course must have the goal of lowering costs by reducing error and increasing maintenance efficiency. Such a course ensures continuing maintenance quality with resultant customer comfort, satisfaction and safety. A human factors course promotes improved communication and maintenance teamwork. The course also creates an awareness toward workplace safety with resultant reduction in a variety of measures like equipment ground damage and job-related injury.

Maintenance personnel learn best when the information has high face validity -- that is, it must be obviously applicable to maintenance tasks. A course must apply basic scientific principles to real-world problems. The course must not only offer guidance and "how to" information, it must also provide a basis upon which students can locate additional information and guidelines. Human Factors knowledge, procedures and tools must remain at the airline when instructors leave.

Our course provides a blending of scientific principles with real-world maintenance challenges. The learner becomes aware of human capabilities and limitations in regard to physical, sensory, cognitive and environmental factors. The result is that the trained technician, upon completion of the course, is able to recognize human-centered ways to minimize error and enhance human performance in maintenance.

We created the FAA *Human Factors Guide for Aviation Maintenance*. Therefore, the *Guide* is an important part of our course. We also developed the Ergonomic Audit Software provided by FAA. The combination of the *Guide* and the audit software provides our course graduates with the knowledge and tools to integrate human factors with airline maintenance. The course instructors each have over 25 years of experience working with a variety of applied aspects associated with human factors in maintenance.

The accompanying presentation slides preview our approach to the Human Factors Course and provide an outline for the class which can range in length from two hours to three days. Our course covers all the topics proposed by [JAR 65](#), and has evolved from numerous interactions throughout the international aviation maintenance community.