

BIOGRAPHY



David T. Warner

Senior Associate, Munro & Associates, Inc.

David Warner offers clients of Munro & Associates Inc., extensive expertise in product design for serviceability, warranty reduction and design for manufacture. During David's 9 years with Munro & Associates Inc., he has provided clients with benchmarking, costing, and redesign services for measurable improvements in quality, assembly, serviceability and total accounted cost. David has more than 28 years of automotive vehicle systems service, technical support and training development experience.

Prior to joining Munro & Associates, Inc., David held a position with Raytheon Professional Service's Learning Division assigned to General Motor's Technical Training Development program. David coordinated and provided technical training at the Master Trainer level for GM's North American export vehicles. David was also project lead for GM's Advanced Technology Vehicle Training Development program whereby he directed training development for GM's hybrid technologies utilized in the BAS and Two-Mode Hybrid systems. David also assisted the Raytheon Professional Services Global Product Team as a Technical Lead.

Prior to Raytheon, David worked for TAC Automotive on assignment to Ford Motor Company in Allen Park, Michigan. He provided technical support to Ford Motor Company Technicians and tracked product concerns for development and plant engineering. In addition, he was part of the pilot program to provide technical approval and author diagnostic field procedures for Fords ZF CVT & 6 Speed Automatic Transmissions. This program expanded to include all of Ford's transmissions and still stands today, saving Ford in warranty repairs while enhancing both the customer experience and engineering accountability.

David's automotive career began in 1977, where he entered the automotive service sector. He has held various positions with Porsche, Audi, Mitsubishi, BMW, and Volkswagen franchises including Lead Technician, Team Leader, Quality Control and Shop Foreman.

David holds an Associate's degree in Electrical Engineering from the Cleveland Institute of Electronics. In addition David was honored to be named Graduate of the Year and inducted into the Alpha Beta Kappa Honor Society in 1996. David is also a graduate of the Motech Automotive Education Center under Chrysler's stewardship in 1978. In addition, David has received extensive training with

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Porsche, Audi and Mitsubishi achieving Master Technician status with each Manufacturer.

David is a member in good standing of the Society of Automotive Engineers (SAE).

Early in David's career he was certified for more than two decades as an Automotive Service Excellence (ASE) Master Technician.

Industries that David has worked in while with Munro & Associates span multiple automotive systems, military, electrical energy generation & storage, industrial HVAC, medical supply, agricultural, knitting machinery, food storage, and heavy equipment.

In the public sector David performed a lifecycle study of Li-Ion batteries as a replacement for traditional Lead Acid batteries in a 3 year military environment. This study included piece cost, installation, replacement, fuel, transport, storage and deployment status cost comparisons. Included in this study were the temperature challenges of Li-Ion chemistries and new capabilities such as "Silent Watch" and improved battery state monitoring.

Also in the public sector, David worked with a team to deliver studies of automotive Nickel Metal Hydride (NiMH) and Lithium Ion (Li-Ion) Battery Hybrid systems for the EPA. These studies directly impacted 2025 automotive regulations concerning fuel economy.

David's responsibilities during the EPA study included:

Complete costing of the following components within an LG Li-Ion Battery System.:

- Management Module (BMM) to the Printed Circuit Board (PCB) and Surface Mount Device (SMD) level
- Battery Disconnect Module (BDM) to the PCB and SMD level
- Li-Ion Battery Module assembly including all internal and external harnesses, sensors, frame work and housings up to but not including the prismatic cell

Complete costing of the following components of the Ford Fusion Hybrid.:

- Battery Disconnect and all High Voltage (HV) harnesses and connectors.
- DC-DC Control Module to the PCB and SMD level
- Battery Management Control Module to the PCB and SMD level
- Battery System Control Module to the PCB and SMD level
- Traction and Generator Speed Sensor Assemblies for the Electronic Continuously Variable Transaxle (ECVT)
- NiMH Battery Pack assembly including all internal harnessing, sensors, frame work and housings up to but not including the NiMH cell