



**JOSEPH F. ARRUDA, III**  
**SENIOR CONSULTANT**

[jfarruda@engsys.com](mailto:jfarruda@engsys.com)

Mr. Joseph Arruda is a Senior Consultant for ESI, with over 22 years of experience in consulting, failure analysis, laboratory procedures, and testing. He has performed failure analysis investigations on mechanical, electrical, hydraulic, and pneumatic systems and components for recreational, commercial, and industrial vehicles, as well as light civil aircraft.

Mr. Arruda specializes in the maintenance of automotive and light civil aircraft systems, components, tires, and standard-of-care for automotive and aviation maintenance personnel and facilities. He has over 43 years of automotive experience, is a Master Automotive Technician, and is certified by the National Institute for Automotive Service Excellence (ASE). He also has more than 25 years of experience as a certified Federal Aviation Administration (FAA) Airframe and Powerplant Technician, and holds a current FAA Inspection Authorization.

**Areas of Specialization**

Vehicle Maintenance, Industry Practice, and Standard-of-Care  
Vehicle System and Component Performance, Failure Analysis, and Testing  
Post-Accident Vehicle Inspection and Documentation  
Post-Repair Evaluation for Return to Pre-Accident Condition  
Commercial Truck Brake Inspection  
Vehicle CDR / EDR Imaging  
Aircraft Repair, Maintenance, and Alteration  
Aviation Maintenance Standard-of-Care and Industry Practice  
Aircraft System and Component Performance, Failure Analysis, and Testing  
Post-Accident Aircraft Inspection and Documentation

**Education**

**Automotive**

Southern California Regional Occupational Center (Automotive Maintenance, Power Mechanics)  
Volvo of America - Master Technician Certification  
Saab Scania - Master Technician Certification  
Bosch Automotive Technical Training Classes (Fuel injection, Ignition & Charging and Electrical Systems)

*August 2019*



Bendix Commercial Truck Products Training  
Automotive Career Development Center UYV-43 (Hybrid and Electric Vehicle Training)  
Bosch CDR Tool Technician Training (IPTM) 2018

### **Aviation**

El Toro Marine Aero Club A&P Mechanic Apprenticeship  
Teledyne Continental Motors Aviation Technician Advanced Training Program  
Embry Riddle Aeronautical University (Professional Aeronautics)  
Lycoming Engine Service School and Disassembly/Reassembly Courses

### **Continued Education**

Human Factors in Traffic Crash Reconstruction (IPTM) 2017  
Applied Vehicle Dynamics Course Precision Auto Research 2018  
Greater Southwest Aviation Maintenance Technician Inspection Authorization (IA)  
Refresher Training 2019

### **Licenses and Certifications**

ASE Master Automobile Technician A1 – A8, 1979 - Present  
ASE L1 Advanced Engine Performance Specialist, 2016  
ASE L3 Advanced Light Duty Hybrid/Electric Vehicle Specialist, 2016  
Airframe & Powerplant Mechanic, License #: 3477791  
Federal Aviation Administration (FAA) Inspection Authorization  
Private Pilot (Single & Multi-engine Land), License #: 3477791  
Sports Car Club of America SCCA Competition License  
Certified Industrial Forklift Truck Operator

### **Professional Affiliations/Honors**

#### **Society of Automotive Engineers (SAE)**

Member

#### **Professional Aviation Maintenance Association (PAMA)**

Member

#### **Volvo International Service Technical Association**

VISTA III Competition Finalist



**Sports Car Club of America**

Regional Class Champion 1979, 1980

**Positions Held**

**Engineering Systems Inc., Irvine, California**

Senior Consultant, Automotive & Aviation Maintenance, 2011 – Present

**Exponent, Failure Analysis Associates, Irvine, California**

Senior Associate March, 1997 – April 2011

Consultant – Specialized in automotive and aviation failure analysis related to tire installation, vehicle repair, and system and component maintenance. Analysis of forklift truck operation, preventative maintenance and repair.

Test Specialist – Artifact testing, failure analysis, evidence handling, storage, documentation, database maintenance and ASTM standards compliance.

Laboratory Technician – Artifact testing, laboratory facility and equipment maintenance, equipment calibration, and regulatory compliance.

**Lenair Aviation, Inc., Santa Ana, California, John Wayne Airport**

Airframe & Powerplant Mechanic, 1997 – 1998

Responsible for the maintenance of 15 single and multi-engine flight school aircraft.

**Tustin Nissan Saab Alpha Romeo Maserati Buick Pontiac, Tustin, California**

Master Automotive Service Technician / Advanced Diagnostician, 1996 – 1997

Performed new and used vehicle repair, with a focus on vehicles with complex system malfunctions and intermittent failures.

**Mission Viejo Acura Saab, Mission Viejo, California**

Master Automotive Service Technician / Lead Saab Technician, 1995 – 1996

Led the setup and operation of a Saab vehicle service department and provided oversight and direction for other Saab technicians.

**Gotta Love Airplanes, Inc., Santa Ana, California, John Wayne Airport**

Corporate Officer / Co-Owner / Operator, 1994 – 1999

Owned and operated a general aviation maintenance company specializing in maintenance, repair, and alteration of light civil reciprocating engine aircraft.

**Tustin Nissan Saab Alpha Romeo Maserati Buick Pontiac, Tustin, California**

Master Automobile Service Technician, 1994 – 1995

Responsible for new and used vehicle maintenance, repair, and reconditioning.

**Brady's Foreign Car Repair, Laguna Niguel, California**

Master Technician / Lead Technician, 1994

Performed general automotive maintenance and repair.

**Viking Independent Auto Service, Laguna Hills, California**

Master Automotive Service Technician, 1992 – 1994  
Performed maintenance and repair of Saab and Volvo automobiles.

**MCAS El Toro Marine Aero Club, El Toro, California**

Apprentice Aviation Mechanic / Airframe and Powerplant Technician, 1991 – 1993  
Performed repair, maintenance and alteration tasks on aviation systems and components.

**Swedish / Asian Autoservice, Santa Ana, California**

Master Automobile Technician / Lead Saab Technician, 1989 – 1992  
Led the set up and operation of the newly developed Saab automobile service and maintenance department.

**J&B Imports, Inc., Orange, California**

President / Co-owner / Operator, 1982 – 1989  
Owned and operated an independent import and domestic auto repair and restoration shop. Expanded the business to five full-time employees and two working partners.

**Volvo of Riverside, Riverside, California**

Master Technician, Shop Foreman, 1981 – 1982  
Performed maintenance and repair of Volvo automobiles. Responsible for shop work quality and day-to-day operations of a new car dealer service department.

**Orange County Volvo, Inc., Anaheim, California**

Master Automotive Service Technician, 1976 – 1981  
Responsible for the maintenance and repair of all vehicle systems, specialized in gasoline/diesel engine, automatic/manual transmission, drive axle maintenance, repair and overhaul. Managed preparation and competition driving of the Orange County Saab sponsored Saab racecar.

**Kramer Motors Volvo, Inc., Santa Monica, California**

General Automotive Technician / Line Technician, 1975 – 1976  
Responsible for general powertrain maintenance and repair; specialized in automatic transmission repair and overhaul.

**Publications/Presentations**

**Arruda J, Daws J, Auflick J.**, “Determination of the Standard of Care in the Tire Service Industry”  
International Tire Exhibition & Conference, (ITEC), September 2016.