

Professional Resume Of

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WORK EXPERIENCE

- 40 + years Commercial and Naval Engineering Experience
- 20 + years in commercial and government business development
- 20+ years program and project management experience
- 20+ years experience in the operations and maintenance of gas turbine engines used as prime movers (marine & generator sets)
- 30+ years working in and around industrial and ship yard environments
- 35+ years experience in the operations and maintenance of diesel engines (marine & automotive & heavy duty trucks and equipment)
- 35+ years of installed firefighting equipment operations and maintenance
- 15+ years experience with spark ignited natural gas fueled engines (co-generation applications)
- 15+ years working with various engine exhaust emission control devices and systems testing, including diesel, natural gas, dual fuel (diesel & natural gas) and gasoline fueled engines
- 10+ years experience with dual fuel (CNG & LNG), piloted ignition engines (power generation & automotive)
- 15 + years of civilian litigation experience
- 20 years in military engineering investigation
- Experienced in deposition process (both being deposed and assisting)
- One trial in 2015
- 4 years classroom teaching environment 53 & 71 series Detroit Diesel engines
- 10 years experience with shipboard training staff for gas turbine and diesel propulsion systems, including Fairbanks Morse and Colt Pielstick engines
- 4 major military and civilian courses involving developing and managing equipment maintenance programs.
- Courses in reliability and maintainability programs.
- 40+ years hands-on experience
- 10+ years investigation of automotive cooling systems

CAREER HISTORY

Kerberos Solutions, LLC. Founder, CEO & President, April 2003 - Present

Kerberos Solutions was founded as a hobby company in 2000 to develop and sell an automotive "Do It Yourself" Security System via the Internet. After the separating from Clean Air Partners, Kerberos Solutions became an engineering services company. Mr. Kelly and

associates are conducting forensic engineering and due-diligence investigative services, and providing engineering damage and loss appraisals. Kerberos has also providing business development services for a variety of clients including identifying state and federal grant money for programs, providing engineering and procurement services for engine test cell equipment, and facilities. Kerberos is providing technical oversight in the restoration, operation and maintenance of a poorly designed 1.2-megawatt cogeneration system. Kerberos Solutions is working with Evan's Cooling Systems and their new coolant to set up demonstration programs in marine, automotive, heavy equipment, power generation and cogeneration applications. Kerberos Solutions is also working with GSE, Inc. an engine development company who has a novel approach to light weight and multi fuel diesel engines for a variety of applications. Kerberos has been retained by Buck Marine Diesel to evaluate a new diesel engine design. This analysis includes patent and hardware review. Kerberos Solutions is developing engineering operations and maintenance procedures for the owner of a new 74' diesel powered yacht in the Bay area.

Clean Air Partners, Inc. Manager Special Projects, June 2000 – April 2003

Clean Air Partners and BKM merged into one company offering Dual-Fuel™ technology on both heavy duty truck and generator sets (300-2000KW). Responsible for program and project, contract management and facilities security. Conducting reliability and maintainability investigation, conducting failure modes, effects and analysis, providing forensic engineering and investigative services both internally and externally to CAP. The internal investigations conducted included emission control devices, natural gas fuel injection systems and Liquefied Natural Gas (LNG) Storage systems as found in heavy duty truck applications.

BKM, Inc., Manager Special Projects, 1993 – June 2000 (consultant 1983 -1993)

Responsible for program and project management, patent review, contract management, new business development and facilities security. Developing new business in Dual Fuel Engines (diesel & natural gas) and direct, high-pressure gasoline fuel injection systems for two-cycle engines for a variety of customers. Directly responsible for over \$8 million in state and federal grants and contract funding from various OEM, s). Conducting reliability and maintainability investigation, conducting failure modes, effects and criticality analysis, providing forensic engineering and investigative services and due diligence studies to a diverse client base (4 major cases). These cases range from rubber tired cranes, aftermarket exhaust emissions devices for automotive systems, heavy duty off road and large power plants internal combustion engines. Providing systems engineering expertise on large engineered systems such as cogeneration power plants using large reciprocating and gas turbine engines as prime movers. Program Manager for a US Navy contract for the Shipboard Gage Calibration Program, providing technical and documentation support to US Navy Calibration Teams.

RCI, Project Director, 1991 - 1992

Provided project management and technical expertise in developing and producing highly technical documentation for a new Marine Gas Turbine propulsion system and 2,000 KW diesel generator sets. Provided forensic engineering investigative services to the U.S. Navy and provided recommendations as to Government potential for financial responsibility as claimed by the ship builder.

Advanced Technology Inc., Manager, Systems Engineering Special Projects, 1983 - 1991

Responsible for field office management, marketing, project management and client relations. Development and management of various Marine Gas Turbine, Diesel Engine, Automated Control Systems and cogeneration programs including the RACER cogeneration propulsion system being developed for the US Navy by Solar Turbines Inc. These programs included operations, reliability, maintenance and training programs.

United States Navy, Gas Turbine Systems Chief, Senior (GSCS), 1963 - 1983

A very successful 20-year career, serving on various ships and shore stations, including a three-year tour as Senior Member of the Gas Turbine Mobile Training Team, evaluating ship's Engineering Department readiness and conducting in-depth material condition inspections on both diesel and gas turbine powered ships. Other noteworthy duties included a four-year tour teaching diesel engine propulsion and auxiliary systems and a brown water tour in Viet Nam with Special Operations Coastal River Division 113.

Forensic Engineering Investigation Experience

- Kerberos Solutions has been retained by Heavy Duty Truck repair facility to investigate an accident involving a tire failure causing severe injury to the driver and how that failure may relate to the engine electronic control system.
- Kerberos has been retained to investigate engine and emission system and component failures due to the use of an improper lubricating oil. Mr. Kelly is tasked to research and conduct tests, prepare trial exhibits and testify at court. This is a class action suit.
- Kerberos has been retained by a defendant repair company in an alleged Carbon Monoxide poisoning of the owner/driver of the over the road tractor. The claim includes failure to properly reinstall the engine exhaust system after the engine was removed for overhaul.
- Kerberos has been retained to investigate excessive failures in six International heavy duty trucks located in the Sacramento area. Failures include engine, electronic and emission control systems, causing the fleet owner to suffer business losses due to the non-availability of the trucks.
- Kerberos solutions has been retained by a trucking company in Texas to investigate a series of engine failures involving maintenance and faulty engine emission systems. The trucks have experienced excessive shop times and inadequate repair that has caused owners to lose business.
- Kerberos has been retained by a defendant fuel additive company to evaluate gasoline fuel systems as found in marine, garden equipment and automotive applications. The investigation is to understand the effects of water in the fuel system including the use of E10 gasoline.
- Kerberos has been retained by a major filter manufacture to investigate an engine failure that the plaintiff claims were caused by a defective filter used in the combustion air system. Upon submittal of my expert report, the plaintiff dropped his law suit.
- Kerberos has been retained to evaluate failures of engine exhaust emissions systems including EGR and Diesel Particulate Filters in a fleet of at least 4 heavy haulers and how the failures might relate to excessive down time suffered by the fleet owner.
- Kerberos has been retained by a defendant company in a case that alleges gasoline fuel quality has caused a generator mounted in an RV to prematurely fail. Kerberos will inspect the fuel system, fueling and maintenance history of the RV. This case settled in favor of our client.
- Kerberos has been retained by the plaintiff to investigate a rental box truck inadvertently going into reverse resulting in the driver being trapped between the truck and a car and breaking one of his legs. The investigation will require inspecting and testing of the truck and transmission and review of the maintenance history of the vehicle.
- Kerberos has been retained to investigate engine and control failure with a Personal Water Craft resulting in a collision with a larger boat and resulting in death to one and severe injury to one of the riders.
- Kerberos has been retained to investigate a catastrophic engine failure in a 2012 Mercedes after an oil change by a lube & tune facility. The investigation revealed that a wrong oil filter was installed and resulted in oil starvation to the engine. The case settled in favor of our client.
- Kerberos has been retained by a law firm representing the home owners association of a high rise condo with a malfunctioning emergency diesel generator. This investigation will include

determining the root cause of the engine cooling system leakage as well as other installation issues, including but not limited to piping, vibration, combustion air intake and lack of fire protection for the engine room.

- For a mid-west trucking company, Mr. Kelly is investigating the premature failure of 100+ diesel engines using Exhaust Gas Recirculation (EGR).systems, used by a nation wide fleet of over the road long haul trucks. The investigation involves engine lube oil related issues
- For the owner of a 90' commercial fishing vessel, Mr. Kelly is investigating a catastrophic failure of the vessel's main propulsion diesel engine after only 4,000 hours of operation. This case is in the early days of discovery.
- For the owner, Mr. Kelly is currently investigating multiple failures of a newer 150HP outboard engine mounted on a 20' fishing boat. The engine is exhibiting oil consumption, performance and over heating problems. The engine has been serviced by a dealer numerous times without success.
- For a major yacht manufacturer, Mr. Kelly investigated allegations into a faulty main engine exhaust system allowing water to enter into the vessel engines. Mr. Kelly prepared and submitted his preliminary report and the client was released from the litigation.
- For the defense, Mr. Kelly is investigating an allegation of Carbon Monoxide poisoning and other potential hazardous fumes from an auxiliary diesel generator and other equipment installed in a large mobile dental van. The mobile dental van is used by a school district in northern California. Mr. Kelly is representing the manufacture of the van.
- Currently investigating severe electrical issues involving the main engines, generator and various auxiliary equipments and DC electrical systems on a 35-foot fly bridge sport fishing boat. The case is settled May 24, 2010
- Currently, investigating the catastrophic failure (seized piston) in a main propulsion diesel engine installed in a 42' yacht. The seized piston appears to have been caused lack of proper maintenance to an exhaust riser allowing sea water to enter the number 8 cylinder and the cylinder hydraulically locking and breaking the connecting rod and destroying the engine block
- Currently, Mr. Kelly is conducting an investigation into the use of "blue" dye as might be used to deter theft of diesel fuel from a construction site.
- Mr. Kelly conducted an investigation for a defendant OEM diesel engine repair company located in Alaska. The allegations include a breach of the standard of care for the repair of the main engine found on a large fishing vessel (case settled in favor of OEM Repair Company in April 09).
- Mr. Kelly investigated a claim against an oil changing company that had changed the oil in a 6 liter Ford diesel engine and then allegedly over filled the crankcase causing the engine to catastrophically fail. Kerberos represented the defendant in this case. Our investigation revealed that the crankcase was diluted with more than 50% diesel fuel, most likely caused by failure of one or more fuel injectors due to water contamination of the truck fuel system. The plaintiff withdrew the lawsuit.
- Mr. Kelly conducted an investigation for a defendant Valve manufacture in the use of asbestos in various equipment and piping systems found onboard pleasure craft and yachts. This case was resolved with our client being dismissed from the suit in July 09
- Kerberos was retained by a farming enterprise to conduct an investigation into claims that farm personnel damaged a D9 CAT crawler tractor that had been rented from a rental company. Mr. Kelly submitted his preliminary report and the case settled in favor of the farm.
- For an east coast insurance company, conducting an investigation for the defense of their client gas station in a case alleging contamination of diesel fuel with gasoline. Kerberos Solutions evaluated repair reports and evaluated potential additional claims. This case settled in favor of the gas station.
- Mr. Kelly and Kerberos Solutions associates were re-retained in the matter of Evan's Cooling Systems vs. General Motors. The case included Patent Infringement and Trade Secret

Misappropriation (black box agreement). This case went to appeal and the client has been awarded a jury trial. Kerberos will provide investigation services and expert testimony as required (This case settled in favor of Evan's Cooling Systems, October 08).

- Principal investigator in a Class Action Suit (certified January 07) against a Marine Diesel Engine Manufacturer. The case involves failure(s) of the marine engine aftercooler assemblies and the ingestion of metal contaminants and sea water by the engines resulting in premature failure. Kerberos Solutions conducted the investigation that was directly responsible for uncovering the latent defects leading to these failures.
- Currently investigating a 3 engine, 1,125kW natural gas fueled cogeneration power plant that has failed to meet contract performance specifications. Kerberos Solutions was directly responsible in determining a number of installation, operations and maintenance defects in the systems. This case went to arbitration and was found in favor of the plaintiff. Kerberos has been retained to provide technical oversight in the restoration and operation of the cogeneration system.
- Conducted an investigation on two MAN 1,300 HP diesel engines that the owner has claimed numerous problems including broken oil pan bolts on one of the engines. Kerberos has arranged to place the engines on a dynamometer for complete testing and will provide a technical report to the vessel owner.
- Currently conducting a due-diligence investigation for an investor group regarding a proprietary cogeneration device using waste heat to power a thermal powered motor in order to generate electricity.
- Currently investigating a failed 8.2 Detroit Diesel engine that has a connecting rod through the engine block. The vessel owner is in a dispute with his insurance company. The vessel is a 51', twin engine motor yacht
- Mr. Kelly and Kerberos Solutions associates are conducting a due-diligence investigation for a group of investors. The technology under investigation is a diesel fuel and gasoline enhancing technology that claims to reduce fuel consumption and enhance engine exhaust emissions. Kerberos Solutions is directly responsible for approving test protocols and securing proper engine testing facilities and services as well as laboratory services for chemical analysis of the fuel after it passes through the device. Kerberos is then tasked to provide a comprehensive technical report of its findings.
- Mr. Kelly conducting an investigation involving a 16V-92 Detroit Diesel Engine used as a main propulsion engine in a 100' motor vessel. The engine has suffered a broken crankshaft after 150 operational hours of being rebuilt. This case settled in favor of the plaintiff and Kerberos solutions was retained to provide technical oversight during new engine assembly and installation. Kerberos also developed and implemented a propulsion system maintenance program including establishing a lube oil analysis program.
- Mr. Kelly was the designated engine expert for the plaintiff in a case involving excessive engine vibration in two CAT 3406Es installed in a 61' motor yacht. This case settled in September 04. Mr. Kelly participated in the settlement conference on behalf of the plaintiff.
- Mr. Kelly conducted a loss analysis for client in dispute with an insurance carrier regarding the total loss of a large natural gas fired CAT 3512/chiller compressor package involved in a roll over accident while being transported by a commercial carrier in New Jersey.
- Mr. Kelly was the primary investigator and case manager in the case of Evan's Cooling Systems vs. General Motors. The case included Patent Infringement and Trade Secret Misappropriation (black box agreement). Mr. Kelly was instrumental in the discovery of tampered evidence and bogus test results. Mr. Kelly developed and carried out numerous tests to demonstrate Evan's trade secret.
- Mr. Kelly was one of the designated experts in Fernades vs. Case Equipment Company. This case involves the death of an operator of large piece agricultural equipment that the steering system was allegedly improperly designed and that there is no emergency steering in the

event of complete loss of hydraulic pressure. Mr. Kelly's area of responsibility is for the Plaintiff in evaluation of the automated diesel engine control system.

- Mr. Kelly the designated expert in *Possinger vs. Power Source* a civil matter whereas the allegations include unlawful discharge of fuel in to San Diego Bay and breaches of the Standard Of Care by contracted maintainers of the vessel's two Detroit Diesel Engine engines during an onboard overhaul.
- Mr. Kelly provided technical expertise in a patent infringement case regarding the design of a high pressure fuel injection pump. The case required comparison of the patent(s), inspection of the hardware and interviews with the inventors. The case settled out of court.
- Mr. Kelly was the designated engine expert for the defense in *Gough vs. Halton Marine*, a Maritime case in Federal court. The allegations included improper Cat 3408 diesel engine repair to a commercial fishing vessel. Mr. Kelly was the Primary Investigator and case manager. The case ended in favor of the defense.
- In the matter of *TEMSCO vs. TW Fleet* Mr. Kelly was retained to investigate allegations of premature component failure involving a General Motors V-8, 7.6-Liter Diesel engine installed in a commercial street-sweeping vehicle. During the initial investigation, Mr. Kelly determined that the engine parts being presented were in fact not the engine parts in question. Furthermore, the investigation revealed that some of the vital parts that were reported to be main contributors to the engine failure had been used in subsequent repairs to another engine without any apparent adverse effects. Mr. Kelly's defendant client, T.W. Fleet was released from the suit.
- *Moss vs. U-Haul*, in a recent case Mr. Kelly was designated to serve as a diesel engine maintenance expert on behalf of U-Haul Rental where an allegation of hearing loss due to a defective truck diesel engine was alleged. Mr. Kelly conducted a truck inspection, which included over the road testing and was preparing trial exhibits when the case settled in favor of U-Haul.
- Mr. Kelly developed a test protocol, conducted testing and prepared a performance report as a trial exhibit involving an automotive electric fuel pump for the plaintiff in a consumer fraud case. The defendant is an automobile dealership accused of over-charging for troubleshooting and unnecessary repair work.
- *Ayers vs. Atomic Investments, Hyster Corporation*. BKM was retained by the law firm representing Hyster, who was being sued by an operator of a mobile hydraulic crane built by Hyster. Briefly, the operator was injured when the crane rolled down a hill and ended upside down at the bottom of the hill. The operator alleged the crane engine had failed due to a failure of the engine governor; therefore, the crane was uncontrollable. This case originally started as a \$10 million lawsuit. BKM was in the process of developing a demonstration that would have proven the allegations false and preparing specific questions for the opposing expert when the case settled in favor of Hyster, as the result of the plaintiff becoming aware of the results of BKM's compelling analysis. Mr. Kelly was the primary investigator and case manager.
- For the Naval Sea Systems Command (NAVSEA), provided engineering investigation services concerning main propulsion and electrical power generation and distribution System issues for a new construction ship building program. Mr. Kelly provided NAVSEA with recommendations as to Government potential financial responsibility for claims filed by a major ship builder.
- *San Diego County vs. Ch2M Hill* - This case involved "Breaches of the Standard of Care for Design Engineers". Briefly, Ch2M Hill designed co-generation facilities for the county of San Diego using large reciprocating natural gas fueled engines to generate electric power and waste heat for cooling. The system failed to perform to the county's expectations. Ch2M Hill and others were sued. Mr. Kelly was retained as the primary investigator. Mr. Kelly was responsible for finding the root cause of the systems poor performance (operations

personnel), the key witness, research of over 3 years worth of maintenance records and the development of the trial exhibits. The jury found 100% in favor of the defense.

- From 1980 to 1983, GSCS Kelly served as the Officer in Charge of the US Navy's Marine Gas Turbine Inspection and Training Team. The primary function of the team was to evaluate material condition and personnel performance onboard the Navy's newest class of destroyer's and frigate's utilizing the LM2500 and Allison K501-17 gas turbine engines. The frigate's utilized series 149 Detroit Diesels as the prime movers for ship's electrical power. A secondary role was to evaluate material condition and personnel performance on various diesel powered ships. This work included forensic engineering investigation into the cause of failure for both propulsion and power generation and auxiliary equipment.

PROFESSIONAL ORGANIZATIONS & GROUPS

Forensic Expert Witness Association

San Diego Chapter SUBGROUP

A subgroup of Forensic Expert Witness Association

The Following Groups Can Be Found On LINKEDIN.COM

Diesel Engine Emissions Reduction - On and Off Highway

Diesel Engines Running on Natural Gas-Dual Fuel/Bi-Fuel

Forensic Engineering Litigation

Forensic Expert Witness Association

Forensics and Failure Analysis

Gas Engine Group

Global Engine Professionals

Global Marine Insurance Underwriting & Claim Forum

LLOYD'S OF LONDON

LNG as marine fuel

Marine Propulsion Networking Group

Middle East & Africa Due Diligence, Fraud, Risk Investigation & Compliance

National Association of Fire Investigators

Professional Forensic Engineers

San Diego Chapter SUBGROUP

A subgroup of Forensic Expert Witness Association

EDUCATION

Military Course Work:

Thirteen major Naval engineering courses involving operations and maintenance of Diesel, Marine Gas Turbine and Steam propulsion and electrical generation systems, including ancillary equipment and their highly automated control systems.

Civilian Course Work:

Detroit Diesel Corporation Diesel Engine Instructors Factory Course

Various College Courses

Program and Project Management

Proposal Writing

Planned Maintenance Management

Natural Gas Engine Development Studies

PUBLICATIONS

Numerous Expert & Technical Reports, Motor Yacht Firefly Engineering Operating Sequencing System, Studies, Successful Bids and Proposals