

Mark David Collins - Worklife Summary

27 July 1957 – 31 December 1972 | The early years of automotive influence

I was born in the Western Australian coastal town of Carnarvon. The third of five children to Patrick and Dorothy. The first two years of my life were spent on a family sheep station owned and operated by my paternal grandparents alongside their three eldest sons, my father being the eldest. Due to hard economic times and having a young family my parents relocated to Perth, Western Australia in 1959 in search of a more stable life. My father worked initially as a Perth metropolitan bus driver, then a long-haul heavy combination truck driver as well as a part time taxi driver to supplement the family income.

My paternal grandparents along with two surviving sons relocated to Carnarvon in 1959 and established Collins Cabs and Taxi Truck Service which was soon owned and managed by dad's brother Jim. This enterprise was successful and expanded to include Collins Employment Services, specializing in pastoral industry (sheep station) labour as well as Carnarvon Auto Rentals. I was fortunate to spend numerous school holidays in the East Carnarvon Taxi base and workshop facilities owned by Collins Cabs. I was to learn many skills around servicing and repairing the taxi and rental car fleets as well as operating the taxi base as required, Jim was a skilled self-taught auto mechanic and became a qualified LPG Autogas installer/repairer plus a great mentor and included me in most aspects of the business including fitting out new taxis with two-way radios (valve style in those days) and taxi meters. As transistorized two-way radios became available, the fleet was fitted with the newer technology. This man Jim Collins was very influential during my childhood and was always supportive of my career. During my apprenticeship years and beyond I would make time to visit and work alongside him as often as I was able. Jim was always supportive of the Australian auto industry and the local auto dealers in Carnarvon. His first choice (usually Ford) was always to buy local. This was also a great period for the young Aussie petrol head during the late 1960s as V8 engines were an available option in Aussie cars.

Whilst still at school and living in the eastern suburbs of Perth along the railway line I was also attracted by an auto wrecking business operating north of the railway. I was welcomed and befriended by the owner and his youngest son who was working in that family business. This family were and still are to this day heavily involved in dirt track speedway racing and I was invited to become a crew member to help on race days. Eventually, contributing to all aspects of speedway race car building, preparation and repairs as required. I found this family to be very supportive, generous and a major influence during my early years as well as my adult life. The father and owner of this enterprise gave me, at the age of twelve, my first car, an unregistered 1954 Hillman Minx to learn to repair and drive in the hundreds of hectares of vacant bushland that has now been swallowed up by industrial and residential development. We were also fortunate to have access to numerous motorcycles over those years so off-road riding was a favorite pastime. I have owned motorcycles all my adult life. A cruiser style road bike being the current choice.

5 February 1973 – 4 August 1976 | The apprenticeship that almost didn't happen

During the second half of 1972, 3rd year (year 10) of high school at the ripe old age of 15, I was considering my future options beyond school. The school vocation officer had informed me that as I was not an academic, I should go and do an apprenticeship of some sort. I successfully completed all junior high school years in the advanced classes for all four core subjects. It was the first and last meeting I had with that vocation officer. I knew that I would be leaving school at the end of 1972. With my mother's help, I started to investigate potential traineeships or apprenticeships. As a know it all 15-year-old I decided that I knew all about the automotive industry, so I chose a career in aircraft engineering and applied for a traineeship with the RAAF. From a group of approximately 200 applicants, I passed their aptitude test and was sent for a medical. As an asthmatic I failed immediately. Mum suggested that I try again with the Army as they have aircraft as well. I did and got the same result and the same doctor for the medical. He said, don't come back trying for the Navy because I'll fail you again. I then decided to apply for apprenticeships in what was referred to then as Heavy Duty Motor Mechanic. I was successful with the two applications I lodged, and I was offered apprenticeships with the WA State Electricity Commission and the Federal Department of Civil Aviation within the region of Western Australia. I chose the latter as it was regarded as a superior apprenticeship. It wasn't long before I realized how little I knew of the automotive industry.

The apprenticeship with the Department of Civil Aviation, upon completion, bestowed the title of Mechanic (Civil Aviation) even though it had nothing to do with aviation or aircraft. What it did include was a qualification in Motor Mechanic (Heavy Duty) as we were required to repair and service every item of industrial and automotive equipment required to operate and maintain an international or regional airport. This list included all earthmoving equipment from ditch witches to track equipment, tractors, four-wheel drives, cars, utilities, trucks, airport fire appliances (mostly 6x6 trucks) including the firefighting equipment, airport power generation equipment including large stationary engines such as Blackstone and Dorman, automated airport terminal doors, airport sewerage treatment equipment, industrial air-conditioning used in facilities housing staff and electronic equipment. To mention just a few of our duties.

The apprenticeship HQ within this federal department was housed at what was referred to as the "Regional Training School" located in the CBD of Perth, fully equipped and catering for the many disciplines such as mechanics, machinists, boilermakers, radio technicians and electricians. Apprentice masters (usually long-term department employees from the various disciplines) were tasked with coordinating every year's intake of trainees of which there were six mechanics in my

1973 intake and similar numbers in the other disciplines. It was through these early interactions that our Apprentice Masters made us aware of the I.A.M.E. and encouraged us to consider joining as apprentice members. It only took me 18 years to heed their advice.

The time we spent at the Regional Training School varied during our 3.5-year apprenticeship in accordance with practical time spent at Perth metropolitan facilities such as the Perth Airport fire station or the compound workshop where airport ground equipment was maintained, The Regional Workshops at Mt Lawley where major rebuilds were carried out or the Jandakot Airport compound or fire station. Whilst working at the Perth Airport compound and reaching 18 years of age, it was mandatory for all automotive apprentices to acquire their B class truck driver's license (now Heavy Rigid). A six-week country airport posting was also completed (Carnarvon Airport for me) during the second year of the apprenticeship where maintenance and repairs of all airport equipment was done.

The Regional Training School provided intensive specialist training, usually a three week or four week intensive course, provided by the Apprentice Masters, covering hands on topics such as machining (I still use the torque wrench I made in 1973), engine reconditioning including using a cylinder boring bar and cylinder head reconditioning equipment, petrol and diesel fuel system theory, automatic transmission mechanical and hydraulic operation including strip down and rebuild of six common automatic transmissions of the time, differential strip down and rebuild including two weeks of crown wheel and pinion preload and tooth contact setup, industrial air-conditioning repair and maintenance, powerhouse diesel engine theory as well as electronics theory and practical printed circuit board manufacture with functional circuitry such as delay wiper control and capacitor discharge ignition system manufactured using electronic components purchased from a local wholesaler (in the days before Dick Smith Electronics).

During the first three years of our apprenticeship, we attended the standard TAFE day release studies at a Perth metro TAFE covering year two and three studies within the second year. In addition to the regular TAFE day release and in conjunction with apprentices of other various State and Federal departments, we attended a ten-week TAFE intensive block release in the latter half of year one and again, another ten-week intensive block release in the first half of second year. These block release periods covered specialist topics such as automotive body building including chassis modification, advanced welding, fiberglass manufacturing, advanced auto electronics, advanced steering geometry studies, power hydraulics and a few other topics. The Dept of Civil Aviation apprentice masters supervised us for two-week study blocks in the Regional Training School prior to every TAFE exam. Poor results were not tolerated. This intensive training allowed us to complete our apprenticeships in 3.5 years. I was pleased to achieve top heavy-duty apprentice in Western Australia in my final year with an average of 95%.

During my apprenticeship, I was made a permanent officer of the Commonwealth of Australia along with several others in my group. This meant that I was entitled to remain within the Commonwealth Public Service if I wished. At that time, August 1976, the entire automotive intake of the previous group had stayed in the department resulting in significant over-staffing and lack of immediate or even short to medium term opportunities. I chose to resign from the Department of Transport (Air Transport Group) as it was then known with a recent change of Federal Government.

5th August 1976 - 20th June 1979 | The need to find some direction

I had just turned 19, I was still boarding with my parents and after a very regimented 3.5 years as an apprentice I needed to find a job. Initially, I found employment within a new car dealership located in North Perth. They sold and serviced new Fiat, Lancia and AMC (previously Rambler) products and due to several years exposure to Rambler/AMC cars through my speedway activities, I was working mostly on the new AMC cars. As it was mostly minor warranty work, it soon became very mundane, so I sought different work.

I found employment in a recently established Perth-based tyre fitting service that also provided brake, steering and suspension repairs including wheel alignment. This allowed me to reinforce my specialist training from my apprentice days and by working alongside experienced mechanics, I gained additional industry knowledge. During quieter times in the workshop, I would assist in the fitting bays, again gaining valuable experience in tyre fitting and balancing techniques. I was fortunate to develop strong working relationships with several branch managers and tyre fitting staff within this fast-growing network of tyre stores. This early networking was of great value in future years. During this period in 1977, Dad's youngest surviving brother Charlie suddenly passed away at the age of 38. He and I were great mates, he was also a very competent self-taught mechanic and after a few years of self-employed furniture removals for a national business had recently purchased a rigid truck providing Perth to Port Hedland Hot Shots as they are now called. He only completed one trip and passed soon after arriving home on a Sunday afternoon. I took the next day off work to take the truck to the freight depot for my aunty to have it unloaded and inform management Charlie had died and wouldn't be back. I worked with Charlie casually during his furniture removal days doing interstate trips. I offered my aunty my services driving the rigid if she was stuck with the truck but fortunately the previous owner took possession again and there was no need. My truck driving days were still ahead of me.

I left the employ of the tyre service and for a few months I worked casually from home doing general automotive mechanical servicing and repairs as well as seasonal work as a maintenance fitter for a Perth-based food processing company. The

problem with this was that I found myself working on speedway cars two or three days a week for nothing and barely making enough income to live. After a road trip from Perth to Darwin and return as a pit crew member to compete in the 1979 Speedway Sedan National Title, I found myself down to my last bean so in June 1979 it was time for another full-time job.

June 1979 – December 1980 | The search for diamonds, uranium and coal

In June 1979, I gained employment as a field service mechanic for a mineral exploration company and was sent, by air, to the Kimberley town of Derby and then by road to a field exploration camp located at an unoccupied cattle station homestead approximately 90km west of Fitzroy Crossing. Having recently driven through this region enroute to and from Darwin, I was familiar with the country. My role as field service mechanic included repairs and servicing of mostly Toyota 4x4s, Bedford 4x4 trucks, numerous 240 Volt AC mobile generators 3KVA – 15KVA, an old CAT D7 and Fiat Allis dozers, a DRMCO and Aveling-Barford motor graders, JCB front end loader/backhoe, a Cummins powered Foden prime mover, a triaxle cable suspension Boomerang brand float, A Heavy Media Separation plant powered by a V8 air cooled Deutz engine and a small trailer mounted auger drill rig used for shallow exploration drilling to mention just some equipment.

A Hughes 500C jet powered helicopter used for field exploration operations and an Aerospatiale Alouette Lama jet powered helicopter designed for operating in hot ambient conditions with high load requirements. This chopper was loaded with electronic recording equipment and towed a torpedo shaped EM bird suspended on a 30M cable to conduct ground magnetic surveys. One of my duties was to catch and attach an earth cable to the bird each time the chopper landed to prevent static electricity buildup damaging the recording equipment. As recently as 2022 the Lama held the altitude record for a helicopter at 40814 feet.

Several drill rigs operated by various drilling contracting companies operated within a 40km radius providing soil sampling up to a depth of approximately 150M either on surveyed grid lines at close spacing or more remote drilling sites selected by results of air and ground magnetic surveys in conjunction with aerial photo analysis and surface sampling by field crews. The largest drill rig used at this exploration site was a Hughes LDH Auger. An all-wheel drive truck mounted rig capable of drilling large diameter holes generally to a depth of 15-20M. This rig provided bulk samples of the target material Kimberlite in which diamonds may have been formed then transported back to the HMS plant located at the camp for processing down to a concentrate which was flown to a nearby laboratory for sorting by in-house company trained technicians.

I was soon to learn that I was the only field service mechanic employed within the entire 423000 + square km Kimberley region and there were several smaller exploration camps that I was required to visit as the need arose. Even the subcontractors used me as first option because I was onsite most of the time. My exposure to exploration drill rigs, large high pressure air compressors and other associated drilling equipment was frequent. If I didn't have the knowledge or parts, I could communicate with their city bases to expedite a solution. Even the helicopter engineers that were on site full-time would ask for assistance when performing routine maintenance such as jet turbine or rotor head component replacements. Most of this inter-camp travel was in the same Cessna 206 fixed wing from a charter company in Broome that was full time with this operation and flown by an ex-speedway sidecar passenger from Perth. We had plenty in common.

In October 1979, word spread quickly throughout the company that one of the exploration crews operating from a camp south of Kununurra had discovered significant quantities of diamonds in alluvial samples taken near Smoke Creek located south of Lake Argyle. Every company exploration resource from Carnarvon to Darwin plus staff from the eastern states of Australia, a subcontracted HMS plant and operator from Queensland, the company HMS plant from near Fitzroy Crossing was sent to Smoke Creek where a camp was hastily built. Due to the distances between the camp and the HMS plant locations and the lack of decent roads I would use a helicopter to get around. I remained at the Smoke Creek camp until June 1980 and after the arrival of my first nephew I decided a return to Perth was in order.

I spent the latter half of 1980 in Carnarvon working for my uncle within his taxi, rental car and employment services. Coincidentally, the same mineral exploration company I had been working for in the Kimberley region over the previous 12 months were next door to Collins Cabs in East Carnarvon. The manager knew where I had been working and asked me to work for them setting up a diamond processing plant just out of Carnarvon as they had decided to explore for diamonds in the upper Gascoyne River area. It was quite a busy six-month working days in mineral exploration and nights at Collins Cabs. Working for exploration companies in those times for anyone other than career geologists was only offered on a seasonal employment basis so when I returned to Perth at the end of 1980, I decided to apply for work with one of the Perth based exploration drilling companies that I had been around during the previous 18 months or so.

January 1981 – October 1992 | The mineral exploration and engineering drilling years

I started work with a small family-owned drilling company based in the eastern suburbs of Perth, initially as a workshop mechanic whilst the foreman assessed my ability. After a very short time I was required to travel to remote drill rig locations to diagnose and repair any of the drilling equipment, vehicles and associated plant. At the time, this company was relatively small and operating mostly in Western Australia with an office and manager in Cairns, Queensland managing a small division in that area. The drilling equipment was either truck or trailer mounted and purchased from Australian drill rig manufacturers. The father and eldest of two sons had established the company in the late 1960s to take advantage of the nickel boom of that period. At that time, most mineral exploration drilling in softer ground was done with open augers where

the sample was driven to the top of the hole by the action of the auger. The accuracy of sampling in this manner was poor due to contamination from the entire open hole as the cuttings made their way to the surface. Once ground water was reached, the sampling process was compromised further or washed away completely. To provide a superior service to their mining company clients, this company discarded open auger drill rods. They designed, pioneered and manufactured their own twin tube drilling system, patented worldwide as Aircore. Using readily available high speed drilling rods normally used with diamond impregnated drill bits, they inserted a smaller innertube and attached a custom manufactured blade bit of their own design that incorporated a cleverly cast internal profile. Using compressed air from a diesel engine powered industrial air compressor via an in-house manufactured air swivel, the compressed air travels down the annulus between the tubes and is redirected up the smaller center tube taking the drill cuttings to the surface to be retrieved via a custom sample swivel and a cyclone into sample bags for the client. There is a vacuum created in the bit face during operation that eliminates air being blasted into the open hole and ensures accurate sampling at whatever metre level the client wishes, even in static or running water tables. This company thrived as the speed and accuracy of their in-house machine shop manufactured aircore drilling system was applied to many exploration and engineering tasks. Clay, coal, uranium, kimberlite, mineral sands, nickel, bauxite, gold and many other minerals could be accurately and quickly sampled using this system.

It was during this year 1981 that this company decided to design and manufacture their own drill rigs within their rapidly expanding manufacturing facility. Small 75metre drill capacity single purpose rigs were built onto HJ47 Toyota Landcruiser cab chassis using the then available full horsepower PTO (power take off) available from Toyota as an option. This PTO would drive the rig hydraulics via a prop shaft, and the chassis mounted air compressor via a HTD belt. When Toyota discontinued the PTO option on later models, a copy was manufactured in-house and would fit the newer Toyotas in the same fashion. Several mineral sands miners purchased a number of these drill rigs and drilling systems so that they were able to do their own sampling and mine development works. Brick manufacturers also purchased these rigs and systems to do their own internal clay pit development. Larger multi-purpose drill rigs up to 600metre capacity were also built for the company contracting division. I was fortunate enough to be involved in many stages of these rigs being designed and manufactured. With demand from many parts of the globe for this innovative drilling system, the company expanded into the international scene servicing clients in PNG, Borneo, Japan, USA, Mozambique to name a few. Track type rig carriers were adopted for some environments, these included Bombardier snow mobiles of various sizes, FMC log carriers and even ex-military armored personnel carriers being used as rig carriers. Several skid mounted single purpose drill rigs were also added to the fleet to provide high speed deep hole mineral exploration using diamond impregnated drill bits.

By the mid-1980s this company had expanded from 30 employees when I joined them to over 500 employees. An offshore engineering drilling division had been created to service several clients requiring engineering drilling solutions on offshore platforms and drillships. The skid mounted exploration drills were adapted for the offshore engineering drilling applications including the removal of all DC electrical components and the fitting of air starters and air inlet shutoff valves on diesel engines to comply with the safety standards of the day. This rapid expansion of the company provided opportunities for most staff, especially those that were there during the rapid growth. The workshop foreman that employed me in 1981 was moved to a special projects role designing and managing the manufacture of new innovations. The role of maintenance manager became mine at the age of 26, the directors appointed me without considering any other applicants. I don't recall the position being advertised. The company was now a global operation turning over tens of millions of dollars annually, maintenance spending was around 10% of gross turnover. All onshore staff were offered the choice of staying within full-time employment or transferring to contract based offshore positions. All the maintenance fitters chose to go after the big money except me. I then had to restaff the workshop. Luckily, I employed two excellent fitters in 1986 as first steps of the rebuild. The offshore fitters would often return to the workshop during their work cycle break to assist with repairs, maintenance and preparation of new equipment to be used for the various offshore contracts.

Exploration drilling is mostly funded by mining profits and driven by commodity prices and demand. Political parties come and go from office with their sweeping policies creating upheaval within numerous industries. The overnight cessation of uranium exploration in March 1983 with national unemployment at 10% was only one example and resulted in several exploration companies exiting Australia and dozens of exploration drill rigs being parked up. More unemployment was the result. History shows that through the 1980s, gold, bauxite and mineral sands were amongst the big movers providing opportunities for explorers and contracting companies until the crash of the late 1980s spoiled the party. The drilling company staff numbers at that time dropped to a little over 100. To allow for my best workshop staff to retain their positions, I agreed to move into a role that combined safety and training, mostly for field staff. The federal government had established what was known as the Training Guarantee Act mandating companies with an annual payroll exceeding 1 million dollars to spend a minimum of 1% of the value of their payroll on certified training. I attended courses covering advanced workplace safety and training and I was tasked with writing and delivering workplace safety modules both in the field and at the main premises. I also coordinated specialist training for admin and management staff as well as detailed record keeping of these costs to comply with the act. I continued to look after fleet management as required and in my spare time I found myself in a HR role interviewing and employing field staff for the exploration division. Fair to say that none of these roles were being done effectively, my job satisfaction was non-existent and the exploration drilling industry of the late 1980s and early 1990s was a hazardous environment. My time was done.

October 1992 – October 1994 | Full time truck driver. Let's clear the mind

I was 35 years of age, married with three young children and my father had passed early in 1991 at the age of 60. I decided, with the full support of my wife, to become self-employed. During the early part of 1992 we had investigated several small businesses that were up for sale and settled on a 5-tonne Hiab truck that was fully occupied delivering timber joinery within the rapidly expanding Perth metro building industry. Driving between 300 and 400 kms per day delivering to new and renovation building sites was a period of clearing my mind. The objectives of the day were completed each day; tomorrow's issues were for tomorrow. The truck was easy to maintain and relatively cheap to run. I became physically fitter than I had been in many years. I added a few new clients and decided now was the time to get back to the tools. We sold the truck to a burnt-out high school teacher. He needed to de-stress as well.

November 1994 – January 2006 | A new business enterprise

My wife and I had constituted a business partnership in 1992 when we purchased the truck so it was a simple matter to register a new business name as a Mobile Mechanic operating from our small rural property on the eastern outskirts of Perth. The local authority granted us Home Occupation approval, so we commenced operation. We had lived in this location since December 1983 and through community activities and our children attending the local school we met many of the community members and local business proprietors. Business built quickly and I became aware of some of the automotive technology improvements I had missed through the 1980s and early 1990s whilst I was focused on heavy equipment. I joined several industry information and training providers and enrolled in courses that quickly improved my knowledge. Many vehicles such as taxis, couriers' vans and utilities, tow trucks, warehouse forklifts were fitted with Autogas systems, so I enrolled with TAFE and completed installing and repairing LPG Autogas systems. They were two separate courses in those days. The type of work in the local area varied greatly from ride-on lawn mowers, vineyard and orchard tractors and machinery, cars, popular 4x4 commercial and passenger vehicles, trucks and trailers of all kinds, even a couple of exploration drilling operations used my services.

I installed a few Autogas systems in those early days, and I was buying my Autogas equipment from a wholesale supplier in Adelaide. One of the directors of this Adelaide company approached me in 2003 with a proposal to install electronic LPG systems on diesel trucks and build the business in Western Australia. They were acting as agents for a Queensland-based company and their target market at that time was long-distance truck fleets and owner operators. Using up to 15% lpg (of total fuel burn) proved to enhance the economy of most trucks that were driven sensibly and run the engine cleaner due to more complete combustion. I installed numerous systems, mostly for owner operators as they were focused on economy. This technology gained popularity and many of our truck clients had us install the same system on their 4x4 work or private vehicle. Due to the high cost of the Queensland system and that companies reluctance to target the recreational 4x4 market, the Adelaide wholesale company engaged the services of an Adelaide electronics company specializing in LPG Autogas equipment for the OEM and aftermarket segments to design and manufacture a more advanced electronic system that could cater for recreational, industrial and heavy transport users. This change in business direction took over most of my work time and I became their national trainer, visiting many locations in Australia as well as several international locations such as New Zealand, United Kingdom, Türkiye, the Philippines and Israel as well as many other international clients visiting me in Perth for tuition.

During the latter half of 2005, the Adelaide Autogas company decided to open a branch in the Perth metro. They were a South Australian state distributor for a popular Victorian manufactured Autogas tank and aimed to expand into the Western Australian market. They had also become Western Australian state distributors for a Toyota Hiace factory approved LPG vapour injection system developed by a Victorian Autogas wholesaler in conjunction with Toyota in Japan. The directors asked me to manage this WA facility until it was fully established when they would employ a WA state manager. Thankfully, my wife agreed to assist me in this endeavor. At this point, I had scaled my Mobile Mechanic business back to my best dozen or so clients. In January 2006, we established the Autogas wholesale branch in a modern warehouse in the Perth northern suburbs approximately 20km from our home.

January 2006 – May 2010 | The Autogas warehouse years.

As the cost of automotive fuels increased, so too did the demand for alternative fuels. Business in the Autogas industry was brisk in Western Australia which had enjoyed a state government subsidy of \$500 per vehicle conversion for private motor vehicle owners since the year 2000. What the industry didn't anticipate was a 100% increase of the WA state subsidy in early August 2006. There was an immediate boom in the WA Autogas industry and an instant influx of hopeful Autogas installation and service centres, some newly established businesses and some auto repairers adding Autogas to their business activities. The WA TAFE system was overrun by applicants wishing to attend Autogas installation and repair courses. Autogas businesses were booking in dozens of Autogas conversions daily. We only thought we were busy that week. The Monday following the WA subsidy increase, the Australian federal government announced a federal grant of \$2000 per private used vehicle conversion and a \$1000 per vehicle grant for converted new vehicles. The national Autogas industry went into meltdown. The long term established Autogas service providers in Western Australia were solidly booked out for at least 6 months. More newly established businesses (including scammers) were trying to take advantage of this massive boom time. Owners of private used vehicles in WA soon realized they would receive \$3000 subsidy from state and federal subsidies, no questions asked. The average conversion for a sedan at that time was approximately \$2200-2400. Then the crunch came.

The two Australian LPG Autogas tank manufacturers located in Victoria cancelled all stock orders and placed all wholesalers on a quota supply basis. Most of the under bonnet Autogas equipment was imported by sea freight from Europe and North America. Our suppliers in Italy were still on summer holiday. The Australian supply of equipment vanished within weeks. Importing equipment, including European LPG tanks via air freight provided some relief but installers were being forced to reschedule clients as well as installing what parts they had and having the vehicle returned later to complete the conversion. At that time, recent changes contained within the latest amendments of the Australian Standards were adopted resulting in a significant increase in price for the LPG systems mandated for post 2003 vehicles due to stricter emission regulations. This cost increase led to accusations against the national Autogas industry of rampant profiteering due to the generous subsidies. There were some cases of profiteering on older unaffected vehicles, otherwise, these accusations were unfounded. Then, the federal government announced that fuel excise plus GST was to be added to the bowser price of LPG Autogas. The Autogas industry recovered and was buoyant during 2007, many businesses had a short period of success, but more storm clouds were gathering.

In the early part of 2008, automotive fuel prices were very high and commentators were predicting petrol would be costing more than \$2 per litre by Christmas 2008. April 2008 was the start of the Global Financial Crisis that lasted officially 18 months. Petrol retailed in Perth for less than \$1 per litre during Christmas 2008. A combination of the GFC, low fuel prices, the soon to be added excise on LPG Autogas and the increase in cost of modern emission compliant Autogas systems resulted in a massive reduction in demand for conversions. The final nail in the national Autogas industry coffin was that both the WA state and the federal governments announced an early wind back of the subsidies. In WA the demand for Autogas conversions dropped by 90% in July 2009 and never recovered. We closed the WA warehouse in May 2010 after allowing sufficient time for any possible recovery.

June 2010 – February 2025 | Rebuilding, refocusing and planning for the future.

Following the collapse of the Australian Autogas industry and at the age of 53, I had to decide whether to rebuild my mobile mechanic business or seek a job in the retail automotive repair sector or maybe back in the resource sector or something else? With the few loyal clients that still used my services I decided, with the support of my wife, to rebuild my business. I maintained my business entity throughout as we served the Adelaide Autogas company as subcontractors. The Motor Vehicle Repairers Act 2003 had been adopted in Western Australia, and I was granted a license within the first 1000 applicants. In 2016 I upgraded my membership with IAME to the recently created Master grade. I successfully rebuilt my mobile mechanic business and continued to operate until my retirement in February 2025 after 52 years full time.

Reflections of the automotive industry.

Since my early schooldays I noticed automotive engineering but as a youngster I never really thought about the big picture. The oldest cars I worked on in those days and into my teens were 1950s models. Features such as collapsible steering columns, dual circuit brake systems, power assisted brakes, power steering, seat belts, dash padding, heater/demister and auto air conditioning were rarely seen and only on luxury models. I soon realized that development in motor racing was closely linked to what the OEM's were producing for the retail market. Vehicles of early those days were maintenance intensive compared to those of today and lubricants were very basic requiring more frequent engine oil changes. It was common for vehicles of the fifties to have two dozen grease nipples. Most new passenger vehicles have no grease nipples, but suspension, linkages, cables and other moving components often last the life of the vehicle due to modern bushing materials. Electronics and metallurgy have taken us from basic ignition systems with breaker points in conjunction with a carburetor for spark ignition engines or mechanical fuel injection for compression ignition engines to electronic ignition and fuel injection and much more efficient engines in general. Add Hybrid, straight EV or hydrogen fuel cell technology and another generation of vehicles with much reduced or no tailpipe emissions are available. Rapidly advancing battery technologies and combustion processes will, in unison, provide for the transport requirements of the future. The automotive industry over the last two decades has witnessed a massive increase in passive safety innovations that most drivers are totally unaware of. This provides a safer vehicle for the consumer, and a significant increase of knowledge required by service and repair technicians. All these changes require businesses to maintain up to date diagnostic equipment, special service tools and sources of technical information. The IAME is an important participant in this area. Workshop safety has improved in most modern automotive workshops; it is rapidly changing with high voltage applications being adopted and it is a topic that requires constant surveillance as young technicians enter the industry and some senior technicians forget or become complacent. Workplace safety is everyone's responsibility.

IAME was a valuable resource in the early 1970's when I started my full-time career and will continue to be a relevant provider of automotive equipment, information and training well into the future. My advice to every technician, apprentice, trainee and even trades assistants is to seek further knowledge constantly. Read every news article and save it, if possible, for reference in the future. Students in the secondary school system that are considering a future in automotive engineering and maintenance technologies are to be encouraged to strive for above average results in all the core subjects. English competency will enhance critical communication skills, mathematics and science competencies are essential to understand the functions of automotive technologies. Diagnostics in the past decades was much more accurate with these skills. They are now essential. Importantly, be honest with everyone, particularly yourself. If you believe that you may have made a mistake, own it then fix it. Others may criticize you at times and some may attempt to take advantage of you. Listen

and absorb these comments without judgement then analyze what you have heard, with a more experienced colleague, family member or friend. There will usually be more than one way to achieve the desired outcome in work and life in general. The day of the Grease Monkey is gone.

All the best.

Mark Collins