

Ken Costello and the MGB V8

This is the nearest thing we have to a Costello history – as updated and authorised by Ken. With the kind permission of the publisher, it is broadly based on an article originally written by Robin Weatherall, which first appeared the USA in The British V8 Newsletter, Volume IV, Issue 2, August 1996 (britishv8.org).

Let's begin with a brief background on the all-aluminium engine which made the MGB V8 possible. This 215.5 cubic inch (3531 cc) 318 lb (144 kg) engine was originally designed by General Motors and fitted to nearly a million Buick and Oldsmobile vehicles during the period 1961-63. However, for the 1962 model year Buick developed an iron block 90-degree V6, based on the aluminium V8 design, which was more compact, almost as light, and significantly cheaper to produce. The writing was on the wall for its aluminium V8 predecessor.

Then, for 1964, Buick developed an iron-block V8 that was also based on the aluminium V8 design. Partly because it featured aluminium cylinder heads and partly because its block utilized new thin-wall casting techniques, the 1964 Buick 300 was also surprisingly lightweight. As with the V6, the new iron V8 was appreciably cheaper to manufacture than the alloy one, and could command a premium price due to its higher power output, so the GM aluminium V8s were finally dropped from production.

About that time, **J. Bruce McWilliams**, then head of Rover in the USA, was visiting his friend **Karl Kiekhaefer** of Mercury Marine and spotted a Buick 215 in the Mercury prototype workshop. Rover was actively looking for an American V8 to power the Land Rover for the US market and delighted to learn that the Buick might be available. Negotiations with GM resulted in a manufacturing license being granted in 1965, and a real success story began. At that time, British manufacturers were unfamiliar with large-scale aluminium die casting, so the big difference in the Rover manufactured blocks and heads was that they were sand-cast instead.

This engine has powered many Rover models over the last 30 years, from the Rover 3.5 litre and P6 saloons, through to the iconic Range Rover. Design development has taken it from 3.5 litres through 3.9 litres to the final 4.0 and 4.6 litre versions; and from twin SU HIF-6 carburettors to multi-port fuel injection. Though the engine is no longer produced by Rover, it is still being manufactured under licence by **MCT Mitchell Cotts Limited**, with the intention of keeping it available long past its 50th anniversary and well into the 21st century.

In 1967, within a couple of months of the launch of the 3 litre, straight six MGC, it became obvious that the car would not be a success. Reviews in the motoring press condemned its handling and performance – and BL management concluded that if MG was to maintain its market position against the challenge posed by the Triumph Stag and the Sunbeam Tiger – another model was a necessity.

The MGC was dropped in 1969 and the following year, **Charles Griffin**, Chief Design Engineer for British Leyland, was instructed to investigate dropping the Rover aluminium V8 unit into the MGB. His production planning team looked at the project for several months and in November, Griffin sent a memo to BL Chairman **Lord Stokes** stating:

"We have investigated the possibility of installing the Rover (Buick) V8 in the MGB and have determined the car would have to be widened at least 3 ½" inches, so obviously this is not feasible."

After this memo, the project was officially abandoned.

Meanwhile, Ken Costello had already solved the "not feasible" problem without widening the car. How did this come about? It is worth knowing something of the background of this tenacious little Englishman. Ken was born in Kent, some thirty miles south-east of London. Having graduated from London Polytechnic, where he had studied automotive engineering, he started work at the government-owned Motor Industry Research Department on the Great West Road in Middlesex.

From an early age, Ken had a passion for motor sport, but his natural flair both as an engineer and behind the wheel was somewhat tempered by lack of funds. Aware of this, in 1959, a friend with a brand new 850 Mini made him an offer he couldn't refuse:

"If you tune this up, you can race it too."

Ken did just that. He burnt the midnight oil in his garage and, a few weeks later, he drove down to the Castle Combe circuit, where he entered a race for Group 3 Special Saloons. On his first outing, he won convincingly – and set a new lap record! Now he got serious. He meticulously prepared and lightened another 850 cc Mini and his run of victories continued – at Brands Hatch, Mallory Park, Castle Combe, Cadwell Park, Crystal Palace and Snetterton.

One day in 1962, while driving down the M1 motorway on the way back from a race meeting, Ken had a dust-up with a Mark II Jaguar, much impressing its driver. When they both stopped for petrol, Ken discovered his opponent was a Jaguar salesman at Cripps Brothers, a Leyland dealer in Sidcup, Kent, not far from his home. The salesman later introduced Ken to **Lady Peggy Cripps**, owner of the dealership, and it was not long before he was running her 'Special Tuning Division' and driving her competition car, which he had also prepared himself.

It was a 1275 Mini Cooper S bored out to 1293 cc, and in it Ken set lap record after lap record. At Snetterton he was timed at 129 mph. In fact, the car was so fast it was not uncommon for him to be compulsorily elevated to the over 1200 cc class – where he still consistently won. On one memorable occasion at Brands Hatch, the Mini was put into a 1330-2000cc race – which Ken also won by a comfortable margin. To his surprise, he was then told that the car's engine must *actually* be over 1300 cc to be eligible for the Championship. Back in the workshop again, Ken bored the block a whisker to 1304 cc and entered a subsequent event. Just before the race, he was made to remove the head in the scrutineering bay so the bore could be measured. Later, as he sat on the grid in pouring rain, Clerk of the Course **Nick Syret**, told him:

"This is probably the only car we've ever checked in case its engine was undersized!"

Ken won anyway. He also won the 1967 Redex British Saloon Car Championship and was never beaten in the wet. Over the next ten years he competed in over 400 saloon car events.

His next step was into Formula 3, when the ever-enthusiastic Lady Cripps bought the ex-Chequered Flag Brabham BT 19, in which Ken continued his run of racing successes. In 1966/67 Ken was asked to drive the Brabham to play the part of a competitor in the **John Frankenhiemer** movie, Grand Prix. He has many stories about this experience but one is particularly memorable. One of the stars, **Yves Montand** was being filmed in the cockpit of a race car as it was towed, at speed with its front wheels removed, behind a Ford GT-40 containing the camera. Obviously Montand had no control over the car and as he was being towed at over 140 mph round corner after corner, his face drained of colour– and, as he later admitted, his bladder drained too.

Back in England after filming was completed, Ken happened to spot a 3.5 litre Rover V8 engine on the floor of the workshop at Pipers Garage at Hayes in Kent. It looked remarkably small and light and Ken was almost able to pick it up single-handed. It was some 60 lbs (27 kg) lighter than the standard-issue, 4-cylinder, 1.8 litre engine in the MGB and the seeds were sown for producing a 'really fast' mid-sized, traditional sports car. After mulling it over for a while, Ken borrowed a damaged MGB roadster from an insurance assessor friend, acquired a second-hand Oldsmobile 215 engine and set to work. It was no easy job, but by the end of November 1969, after six months of trial and error, the car was running and its enormous potential became obvious.

The next car to be converted was a GT – owned by Lady Cripps – which embodied several improvements, including a larger radiator and the rear axle from an MGC. The car was then further developed and refined to a 'production-ready' stage. On test, the performance was 'almost incredible'.

Ken took the plunge and went into business for himself, opening premises at Farnborough in Kent and taking on 8 employees. Customers would supply the car which Ken and his mechanics would convert, using initially a Rover P6 engine and a modified MGB gearbox. The cars were easily identified by their unique egg-box radiator grilles, special wheels, Costello V8 tailgate badges and a distinctive bonnet bulge to accommodate the SU carburettors. Specially made, lower profile inlet manifolds later made that bulge redundant.

The February/March 1971 issue of *Motoring News* featured the first road test of Ken Costello's MGB V8, hailing the car as '*a breakthrough in performance for affordable sports cars.*' A comparison of their performance figures illustrates the huge improvement over the standard 1800cc MGB:

| | MGB | Costello V8 |
|-------------------|------------|--------------------|
| 0-60 mph | 12.1 sec | 7.8 sec |
| 0-100 mph | N/A | 19.2 sec |
| Top speed | 104 mph | 130 mph |
| Horsepower | 95 mph | 155 bhp |

Road testers from *Autocar*, *The Sunday Times* and *The Telegraph* were amongst those unanimous in their praise for the car, its performance and the quality of its engineering.

"It surpasses production standards", said The Sunday Times, "It combines all the tigerish acceleration, power and speed you would ever need with kitten-like docility, mechanical silence... and handling and roadworthiness of a very high order"

A few months later, *Autocar* concluded:

"As a conversion we rate this car as perfect and as a model in its own right, it deserves the highest praise."

Opinions like these obviously rekindled British Leyland's interest, or as noted motoring journalist **Graham Robson** later put it in the July 2005 edition of *Classic & Sportscar*:

"The new Costello-modified MGB with a Rover V8 engine caused a big stir. Plans were immediately laid for Abingdon to produce an 'official' V8."

Robson based this assertion on internal Product Policy Group minutes dated 28th September 1971, and memos to and from **George Turnbull**, Managing Director of Austin-Morris at the time.

On 18th May 1971, shortly after the *Motoring News* article appeared, Ken received the following communication on British Leyland letterhead:

Dear Mr. Costello,

Having recently read the article in Motoring News on your construction of an MGB with the V-8 Rover engine, I have attempted to contact you by telephone but without success.

My reason for contacting you was to express my interest in this installation and also say how pleased we should be here at Longbridge if you could possibly see your way clear to arranging for us to have such a vehicle on loan for a day or two.

I trust you will be able to comply with this request, if so perhaps you would be good enough to telephone, or write to me at the above address, in order that suitable arrangements can be made.

Yours sincerely,

C.A. Griffin

Director of Engineering

Ken telephoned Charles Griffin and told him he didn't have a car available, but would call at Longbridge as soon as he did. Several weeks later Ken turned up at the factory – without an appointment – and asked for Mr. Griffin. He was told that the Director of Engineering was very busy and never saw anybody except by prior arrangement.

"Well, tell him Ken Costello is waiting down here with his new V8 MGB," said Ken.

Charles Griffin arrived almost immediately, accompanied by several senior members of staff, including **Harry Webster** and George Turnbull. They pored over the car in great detail. Then it was whisked away and driven around the test track while Griffin and Ken chatted over lunch. After an hour the car was back, the beaming test driver delivered his verdict, and a clearly impressed Charles Griffin told Ken:

"This is a first class job, how can we help you?"

Apart from engine supply, Ken's main concern was crown wheels and pinions, so he asked:

"How many 3.07:1 crown wheels and pinions are available now that MGC production has ended?"

Griffin offered to check and see what the stock position was. His answer was positive. In the same PPG minutes referred to above, George Turnbull reveals that BL had agreed an arrangement with Ken for the supply of Rover V8s via the company's distribution network (provided Costello Engineering bore the responsibility for warranty claims). Soon afterwards, Ken was asked to bring his car to the BL Head Office in London's Berkeley Square so that the Chairman, Lord Stokes, could see it personally. After he had taken a short drive, he expressed his approval and asked:

"What will you do if we produce this?"

To which Ken replied:

"I can't stop you, but I'll keep on building mine because it will take you two years to get into production."

In late 1971, a brand new LHD harvest gold MGB-GT and a Rover V8 engine arrived at Ken's premises from Abingdon with a request to fit the engine into the car. Two weeks later, Ken personally delivered the modified vehicle to Special Tuning in Abingdon. (Incidentally, BL never paid the £1000 invoice for the work). The MG engineers examined the car closely and, obviously excited by the prospect of building their own version, forged ahead with developing a prototype. Then, in August 1973, BL launched the MGB GT-V8. A couple of weeks before the launch, Ken took out the only ever advertisement for his cars. It cheekily warned potential customers to 'beware of imitations.'

Despite the engine supply agreement previously negotiated between Ken and George Turnbull, Lord Stokes sent out a directive to all dealers instructing them not to sell any new V8 engines without an old unit in exchange – a thinly disguised effort to cut off Ken's supply of engines and take over the market niche he had created.

Undeterred, and knowing that a substantial number of Skylarks and Cutlasses had been imported into Belgium, Ken took a truck over the Channel and after several weeks scouring scrap yards, returned with 40 Buick and Oldsmobile blocks, which were completely rebuilt using new Rover parts. However, with the ready availability of factory cars at a lower price, Ken's customer numbers shrank to a trickle. In all, he reports converting approximately 225 MGB's during the early 70s, of which approximately 20% were roadsters, and one was a left hand drive automatic destined for Canada.

It should be remembered that during the factory development programme, MG made a number of changes to the MGB shell to enable it to accommodate both the V8 and standard 1800 engines. These changes have made present day conversions a much easier project than that faced by Ken Costello – who had actually pioneered most of them. They were in evidence on the Harvest Gold car he had modified at Leyland's request.

For example: The engine mounts were modified, the radiator enlarged in capacity and moved forward, a Kenlowe electric cooling fan added and the radiator duct panel redesigned with the oil cooler mounted underneath. A remote oil filter was fitted, the front inner wheel arches were re-profiled to accommodate specially fabricated exhaust manifolds, the rear engine bay bulkhead was re-shaped to clear the V8, the sump was also re-shaped to clear the front cross-member, the steering shaft was modified with an extra universal joint to clear the exhaust manifolds, the clutch and bell housing were modified and a low-profile inlet manifold was fitted to allow the carburettors to clear the bonnet.

Imitation is the sincerest form of flattery they say – and all of the above modifications, in one form or another, were re-cycled into the BL version of the MGB V8. Leyland also added different suspension bushes, a new alternator bracket, water pump and pulleys, cast iron exhaust manifolds, a variation on the low profile inlet manifold, and alloy rocker covers with an MG logo.

Obviously, Leyland expected to sell a lot of cars, but 'unfortunately the launch corresponded with the oil crisis and the trend towards more economical vehicles.' That has always been the official line, but in the US, by comparison with the average gas-guzzler, the MGB V8 was a more economical vehicle. That said, information that has recently come to light indicates the car's potential success was undermined as the result of BL's upper management being dominated by ex-Triumph executives, keen to advance their own products. MG did, however, produce seven LHD, American specification MGB V8 GTs on the main production line, some of which were used for testing before being sold off. One of them was exhibited at the New York Motor Show in April 1973 and apparently taken on a successful promotional tour of US dealers.

MG had planned to take sales in the US to a whole new level by producing the B V8 in large numbers for export. A commonly given reason for not following this plan was that the model was never certified for the US market because MG refused to crash-test the required number of vehicles. This turns out to be untrue – the records show that the MGB GT V8 was Type Certified by the US Department of Transportation. It was also said that BL didn't have the capacity to build enough V8s to satisfy the US market – in which case, why have the cars US certified? What really appears to have stopped the export drive was BL's decision not to create competition for Triumph models, especially the TR 7, which was just about to be launched, and the V8 Stag.

Production of the MGB V8 GT ceased after only 2591 cars. This was roughly ten times the number produced by Ken and is one reason why genuine Costellos today command a price premium over and above the factory version. Another reason, of course, was that the motoring press, almost to a man, preferred the more powerful Costello version in terms of its superior overall performance.

Unfortunately, there are many more inferior conversions out there claiming the Costello name. As a result, over the years there have been occasional, wholly inaccurate assertions that Ken's work was 'amateurish'. This was possibly as a result of professional jealousies – and was facilitated by the fact that Ken also sold Costello branded parts, such as alloy inlet manifolds, that ended up in cars he never saw. Even today, you should 'beware of imitations.'

When full-time production of his own car ceased, Ken went on to build a few one-off V8s and to produce and develop V8 conversion components – alloy sumps, injection inlet manifolds & plenums, sophisticated suspension and disc brake upgrades, and his own engineered-from-scratch five speed gearbox specifically for the MGB/C and V8. This was prompted by the inherent weaknesses of the standard gearbox, which Ken knew many owners (particularly in the US) would like to replace. He also hoped to find a market as original equipment for other manufacturers.

The result was an innovative, 5-speed, smooth-changing design, capable of transmitting 350 bhp and 395 Nm of torque. Its compact, clam-shell design meant it would slot straight in to a standard MGB. The gearbox excited a good deal of interest and after prototyping and a favourable assessment from The Cranfield Institute of Technology, a pre-production run of 25 was made. Some went to selected MGB owners and others were evaluated by mainstream motor manufacturers including **Ford** (US), **Maserati** and **Rover**. These firms were initially surprised that such an advanced product had been conceived and produced by just one man, but all expressed interest in using the gearbox, provided that quality and continuity of supply could be guaranteed.

At this critical point, and without warning or explanation, the company's bank withdrew funding and the venture ground to a halt. Almost overnight, Ken was left with no backers, no product and no customers. He almost got going again some ten years later, when **Peter Wheeler** of **TVR** decided to use the gearbox (instead of the Borg Warner T5) in all his vehicles, but TVR's subsequent financial woes put paid to that too.

So an innovative and very promising gearbox design was left in limbo while rivals breached its patents and more or less caught up. However, it will come as no surprise that the tenacious Mr. Costello would not give up. Determined to stay ahead, he began work on another, even more technically advanced, 6-speed evolution of his original creation.

In the meantime, from 1990, Ken produced a short run of ten fuel-injected Costellos, which used his own induction system and offered all of the upgrades – particularly of braking and suspension – that had been developed since, or had been left in the pipeline after initial production ceased in the early 70s.

His gearbox aside, updated versions of most of Ken's exceptional products are still available from Frontline Costello of Bath, who still continue to design and produce new components in consultation with Ken, not far off eighty, but as skilled and as enthusiastic as ever. He prides himself in still holding a pilot's licence!