What’s all the fuss about the 100M? A few weeks ago, for the umpteenth time, that discussion topic surfaced again on the Healey AutoX list, leading your editors to decide to take another shot at writing, for the umpteenth time, a definitive answer.

On the surface, the question is all about current market value of one particular variation of the Healey 100. But peel back that layer, and the actual tale tells us much more, about the state of the industry at the time, about period marketing and production practices, and about several facets of that fascinating character, Donald Healey.

So grab a cup of coffee, and let me tell you the version of the story that I know.

Once Upon a Time ...

At the Earls Court International Motor Show in October 1952, Donald Healey, former rally driver and owner of a small high-performance automobile company in Warwick, England, and Leonard Lord, one of the magnates of the large and successful British Motor Corporation, reached an agreement that would resonate in automotive history to this day.

BMC with its network of English suppliers would manufacture and through its international sales network distribute the sleek two-seat sports car that DMH and his little company had designed around BMC’s Austin A90 engine. DMH, as he was known to everyone in the English auto industry, contracted to continue testing and development, and to promote the new Austin-Healey brand in motorsports events.

The plan was that the bodies would be assembled and trimmed by Jensen’s in West Bromwich, then shipped to Longbridge, where the mechanicals and other components would be installed. To prepare for marketing and testing activities, the Donald Healey Motor Company (DHMCo) would make 20 more prototypes while Jensen was gearing up for production of the Austin-Healey bodies.

Four of these prototypes were specifically intended for development use, and two were entered to race at the 24 Hours of Le Mans in
The Le Mans Engine Modification Kit, part number P.280 enables the horsepower output of the engine to be increased from 90 BHP @ 4,000 RPM to 104 BHP @ 4,500 RPM. The effect on performance is marked, and results in improved acceleration and speed. The low speed performance of the engine is not impaired. Maximum performance will only be achieved by correct and careful fitting of the kit.

June 1953. Since the primary purpose of the entry was to make a marketing splash at this internationally renowned race, the cars were only lightly prepared, and ran in full street trim, complete with bumpers. Driving lights were added for additional visibility during night running, the screens were removed and replaced by small racing windshields, and a bonnet strap was added to comply with racing regulations.

Geoff Healey and Roger Menadue mildly tweaked the engines by installing 1.75 inch H6 carburetors in place of the standard 1.5 inch carbs, cold air boxes in place of the air filters, and a mildly hotter cam and distributor with a modified advance curve. A low-ratio 3.66:1 rear end was installed to minimize engine speed on the long high-speed straights. Testing later indicated that these engines were producing a bit over 100 horsepower, more than the stock engines, but speed was not the point. endurance was the objective. The drivers were instructed not to run over 4,500 rpm, which meant top speeds of about 120 mph on the longest straights, though drivers commented that the cars showed their mettle with their torquey ability to handle tight curves. The cars in fact did very well, with both finishing the race, among the 25 that crossed the finish line after 24 hours out of the 60 that had lined up at the start line.

With this splash, combined with proof at Bonneville that the car could run over 100 mph for an extended period of time, and stellar showings on the U.S. show circuit, sales took off when the car came to market in 1953.

Based on what had been learned in the competitive and speed record outings, plus feedback from the marketplace, DMH supervised a series of improvements to the car, starting with use of steel fenders and door skins at the beginning of production, bonnets and boot lids soon after, a change in overdrive ratio, improved springs and exhaust system and a variety of other small running changes during production of the BN1.

The Le Mans Modification Kit

However, nothing was done to increase the horsepower or speed of the car. Following Jaguar’s lead with its own modified cars, DMH introduced a kit of tuning parts in late 1953 called the Le Mans Modification Kit, which was marketed under part number P.280 through BMC dealers. A two-page brochure was made up that advertised the Le Mans Modification Kit.

The kit included many of the components that had been installed on the Le Mans cars, including 1.75 inch H6 carburetors, new intake manifolds, a cold air box and an air duct to provide cool air to the carburetors and balance the pressure of the air supply to the carburetor with that in the float chambers. The kit also contained a different distributor with a different vacuum advance and mechanical advance springs that provided a two-stage advance curve, a higher-lift camshaft, a steel-faced head gasket that resisted burning from higher cylinder temperatures, and a leather strap and buckles for the bonnet.

Dual valve springs, cups, and seats were also supplied, though by that time, these same parts were already being used on all production Healeys, one of the running changes during early BN1 production. Testing showed the modified engine could increase the standard engine output from 90 to just over 100 brake horsepower (with standard 7.5:1 compression pistons). Note that the P.280 kit did not come with high-compression pistons.

These kits could be installed at BMC dealers, by independent mechanics, or owners who were handy with tools. Given the format of the P.280 brochure, it is likely that some dealers may have ordered the kits and installed them on BN1s they already had in stock, or on special order had the kits installed before the cars were shipped from Longbridge, which would have meant that the cars were probably shipped over to Warwick, the kits were installed, and then the cars were trucked or driven back to Longbridge to be shipped to the dealer.

Ever the marketer, soon after the kit was designed, DMH had begun a nice sideline business at his own dealership in Warwick. Not only did he install the Le Mans Modification Kit on customers’ cars, but he also offered some options, including louvering on the bonnet and a neat little M badge that could be
The Heritage of the 100M

A few financial considerations ...

Should you come across a 100M tucked away in storage and wish to pursue a restoration project be aware that the initial cost of that car is likely to be 2 to 4 times the cost of a similar non-100M roadster.

And furthermore, restoring a 100M accurately can be particularly difficult if the car is missing original, properly marked modification kit parts, especially the distributor, carburetors, or cold air box. These components were manufactured in very limited quantities, and few survive today. Some are out there to be found, but it can take a long time to locate them, and rare original bits can bring a high price. As with all restorations, the more effort that is made to get the details right, in addition to quality craftsmanship, the greater the value should be of the finished product. However, for this to be fully realized at the time of a sale, buyers need to be aware of and appreciate those unique feature subtleties that an excellent car may possess.
affixed with integrated wires to the 100 flash on the grille.

At some point, DMH also began offering high-compression pistons, with a smaller dished area in the face of the piston, as an additional tuning option to further increase power. Testing of the kit with the high-compression pistons indicated a yield of 110 horsepower.

Additional modifications were also carried out with the installation of the kits. A special bracket was used to clear the cold air box where the left side support bracket attached to the shroud at the bonnet opening. Initially, in order to swap out the cam, the engine mounts were unbolted from the chassis so that the engine could be raised and shifted so that the cam shaft could clear the left front “X” brace as it was withdrawn or inserted. Later they discovered that by putting a slight bend in one arm of the “X” the cam could be withdrawn while leaving the engine bolted in position.

The one complication to DMH’s modification program (which was available as early as 1954) was that if the customer wanted a louvered bonnet, the original one had to be returned to Jensen, where the under-skin bracing was removed (by drilling out the spotwelds) in order to stamp louvers into the skin. Then the bracing was re-attached into place (some examples of this work have been found with brazing, though welding is another possibility) and the bonnet was repainted before being shipped back to Warwick where it was re-installed on the car. Interestingly, as Roger Moment has pointed out, bonnets that were louvered in this manner can be identified because the original body number stamped into the left-rear flange of the bonnet would be partially obliterated when the brace was re-welded (or brazed) back in place.

This program of supplying modification kits to Austin and installing the kits at Warwick continued on a relatively low-key basis into the summer of 1955. To publicize the kit, Donald Healey Motor Company Ltd. produced a one-page (front and back) brochure describing the “Austin-Healey 100 with Le Mans Modifications”, and under the Specifications it lists the gearbox as having 3-speeds, which indicates that this flyer was referring to upgraded BN1 Healey 100s. There is no indication that records were kept of the number of kits made and sold or installed, either at DHMCo or at Longbridge; certainly none have turned up.

**Birth of the 100M**

By early 1955, planning was well underway for the introduction of the new Austin-Healey model, the BN2, that would go into production in August and be introduced at Earls Court in October. The BN2 would have a four-speed gearbox, plus overdrive, but continued with the same standard 90 hp engine.

Demand for the modification kits had been slow but steady, so the decision was taken that a production version would be offered alongside the base BN2, once again copying the practice at Jaguar of selling its XK150 and XK150M models in parallel.

In this plan, the production process would be simplified slightly. Though cars would still be modified at Warwick – apparently Longbridge couldn’t spare the room for the additional activity or manage the complexity of producing two engines that were almost identical – it was decided that some costs of the 100M conversion could be saved by having Jensen build those bodies destined to be upgraded to 100Ms with louvered bonnets from the start.

With addition of the 100M to the line of 100 models, two-tone paint was also offered as an option, taking advantage of the neat coves that extended from the front fender duct and flash back across the door and to the back of the rear fender, a subtle design change in the BN2 body style. Nevertheless, build records of these bodies having louvered bonnets show that nearly 200 of them were originally painted in a single color.

After a body had been shipped from Jensen’s to Longbridge, where it was assembled into a completed BN2 (with standard engine), it would be transported to Warwick, where the DHMCo would install the 100M modifications – now also including the high-compression pistons that had been a tuning option and heavier anti-roll bar – and the M badge would be wired to the grille flash. The car would then be transported back to Longbridge for shipment to its final destination.

When the first prototype was shown at Earls Court, the marketing brochures and advertising literature called the high-performance BN2s the “100Ms” – the same practice of adding an M to the basic model number as used at Jaguar and other companies in the period to identify their high-performance model. To the knowledge of this writer, that term had never been used before to describe any variation of the BN1s with Le Mans modifications, and was used for the first time in October 1955. (Note: In The Healey Story Geoff Healey notes that DMH made the decision to call this model the 100M since he thought that the term “100 Le Mans” was too cumbersome and associated with other brands and models that didn’t have excellent performance.)

Of some interest is that the Le Mans Modification kit continued to be available for sale through the end of BN2 production, and that the louvered bonnet and bonnet strap could also be ordered through the BMC parts department. The original DHMCo brochure was republished in the same format, but updated to indicate that the modification kit was for use with the four-speed BN2 transmission. It also is likely that many standard BN2s that were languishing on dealer floors in 1956 were upgraded with the P.280 kits (plus high-compression pistons and heavier anti-roll bar) to make them more attractive to buyers.
The Heritage of the Austin-Healey 100M

**Why Does All This Matter?**

This would all be just a matter of historic trivia, were it not for one point. When BN2 bodies were ordered by BMC from Jensen, paint and trim color combinations were specified as well as a number to have louvered bonnets. When these bodies went down the Longbridge assembly line, build cards for each were filled out to indicate, in addition to the Jensen body number, whether the car was right-hand or left-hand drive, the color of car and interior trim, and any options specified in the order. There was also a notation made whether bodies had louvered bonnets.

Consequently, this was the first place where information was routinely documented (existence of the louvered bonnet) that might associate a car with its possibly becoming a 100M. Today, an owner can get that documentation certified by applying to the British Motor Industry Heritage Trust for a production certificate. If the car was originally ordered from Jensen’s to be produced with a louvered bonnet, (and thus likely to be modified at Warwick,) the certificate will carry the note that “As this car was fitted with a louvered bonnet, it is a genuine factory-built 100 M” (or “Le Mans’) Model.”

However, there is a kicker in all this. The rationale for having Jensen build bodies initially with louvered bonnets was that this would make subsequent conversion to 100M models less costly. However, Geoff Healey states in his book, *The Healey Story*, regarding the accuracy of the identification of all units with louvered bonnets as being 100Ms: “There is also an added complication as Austin Exports sold cars with louvered bonnets to certain markets like Malaysia, where under-bonnet heat was causing complaints.” This suggests that a number of these “louvered-bonnet” BN2s (most likely very few) may never have had the 100M mechanical upgrades done to them.

Unless an owner has some other written documentation, such as a dealer’s book of sale or a receipt from DHMCo, there is no way for any subsequent owner to know if the car was originally equipped with the 100M modifications when it was first sold.

Since that time, those BN2s that were modified during the production process — the only units that build records suggest might have been completed as 100Ms without rewriting history since the term didn’t exist until October 1955, and then was only used for cars sold from BMC with the modifications already installed — have taken on almost mythic significance. Even without its original modifications intact (as identified by specific markings, such as on the distributor or carburetors) and in fact sometimes even without any engine at all, a BN2 that can be documented as having originally been a 100M, will command a significantly higher premium than a comparable BN2 without such documentation.

The question of how many louvered-bonnet cars were originally produced has been answered fairly definitively. For many years, reference sources written by or with the assistance of members of the Healey family have agreed that 640 BN2s having louvered bonnets were built on the Longbridge assembly line. More recently, a careful check of the original build cards concurs in the 640 number. For want of other records confirming which of these cars actually received the 100M mechanical upgrades, it has been accepted (e.g., assumed) that all of these BN2s were modified to be 100Ms before their initial sale.

What is considerably less certain, and the topic of much debate, is how many Le Mans modification kits were originally produced during the period from late 1953 until the end of BN2 production. Only two sources for numbers exist. A poster published by BMC in the company magazine “Safety Fast!” in 1968 said “approximately 1200 100Ms were produced,” perhaps working from the same records that Geoffrey Healey used when in 1977 he said that 1,159 Le Mans Modification kits were installed.

**Identification of 100Ms and Le Mans Modifications**

With the substantial premium paid by buyers for Healeys that have the documentation that can prove they were among the 640 BN2s originally built having louvered bonnets, over the past 30 years collectors and commercial restorers alike have been scouring the barns and garages in hopes of finding 100Ms that could be restored. As one might expect in this hobby, the scent of money attracted the scam artists as well, and there have been numerous instances of cars that were claimed to be 100Ms that turned out to have the same car numbers as existing cars or were claimed based on other evidence to be 100Ms.

So say you’re in the market for a very collectible, but still accessible Healey and decide you want one of these 100Ms. How can you tell if the car you’re looking at, either that shiny one at the Monterey or Scottsdale auctions with its bright shiny cold air box and H6 carbs, or that rusty hulk without an engine in your uncle’s barn, is actually a 100M.

The first question always is whether the BN2’s car number or body number indicates that it was one of the 640 listed on the original build cards or build ledger as having been received at Longbridge from Jensen’s with a louvered hood in 1955 or ’56. Either the seller has the certificate from BMIHT that validates that claim, or you can request a build certificate using the car number (or in a pinch, and for some extra cost, the body number) to see if the BN2 with that number had a louvered hood when it was originally completed at Longbridge.

But what if the car number plate and/or the body number plate is suspiciously new? To validate that the car sitting in front of you is in fact the same one that is documented on the BMIHT certificate, there is one definitive connection. When every body was produced at Jensen's in the day, there was a certain amount of hand adjustment required to get the trim to fit the body. In particular, the three alloy cockpit surround rails, and the doors or rear shroud on which they’re mounted generally had to be Cockpit trim moldings all with matching numbers that match the body number.
modified to fit properly. As a consequence, once that adjustment was complete, those three cockpit rails were stamped on the underside, with fairly large number stamps, with the five digits of the body number stamped on the plate screwed to the firewall. Since it’s very unlikely that the cockpit rails from one body will fit perfectly on another body, if the three cockpit rails have the same body number as shown on the certificate, then the body you’re looking at is in fact the same one that was originally received at Longbridge with that significant louvered bonnet already installed.

The hand-fitting process didn’t just involve the cockpit rails. In addition, that louvered bonnet, the boot lid, and the splash panel also required special hand work and so they were also stamped with the same five digit body number – probably at the same time since the stamping always looks identical on all parts of an original car. The bonnet was stamped on the outside of the flange on the left-hand side opposite the cross-brace, the splash panel was stamped on the left front flange, behind the bumper and near the left overrider, and the boot lid was stamped on the semi-circular telescoping stay support bracket.

It is not uncommon to find Healeys with some of these stamped/numbered parts having body numbers from other original cars that they were salvaged from to replace severely damaged or missing components. In fact, it is rather rare that all of these stamped part numbers match or have the correct originally-stamped body number.

But what about all those engine modifications that were installed by one of the workers at DHMCo in Warwick after the body/chassis and drive train were married at Longbridge? There were identifying marks on those as well, and a car that not only can be proven to have been shipped from Longbridge as a 100M, but also has a set of original components from one of the Le Mans modification kits, is among the most verifiable of documented 100Ms. (Or at least it should be, though we’ve seen instances again and again where the very fact that the car was originally a 100M – with perhaps only the original stamped body and chassis plates – was sufficient to justify a substantial premium, without apparently any regard to the originality of the actual modifications.)

The carburetors, of course, were among the core components of the Le Mans kit, and in addition to being H6 1.75-inch AUC 6040X (most common) or AUC 6040 AA (less commonly found) carbs, they differ from H6 carburetors installed on other British Marques (e.g. Triumph), which includes some external machining well as some different internal parts such as suction chamber piston springs and mixture needles.

On all original P.280 kit carburetors, an additional number was hand-engraved on the exterior of each carb under the cast-in number, with the front carb marked 6053 and the rear 6047.

The high-performance distributor, with the 2-stage mechanical advance curve, was...
The Heritage of the Austin-Healey 100M

another component in the kit. On the standard BN2 carb, the part number 40495 would have been stamped into the body. The 100M distributor on the BN2 was stamped 40520. As a side note, since the BN1 distributor had a different vacuum advance linkage than the BN2, the corresponding numbers would have been 40320 on the standard distributor and 40422 on the Le Mans Kit distributor.

In addition, the vacuum advance unit on 100M distributor had 5-17-10 stamped on the hex fitting, while on standard 100s these number were 7-18-12.

Though it wouldn’t be visible on casual inspection, of course, the high-lift cam that came in the Le Mans kit had the part number 1B2892, which would be found stamped on the cam were the engine to be disassembled. It is worth noting that due to wear it is not likely that original cams still survive in 100M engines. There also are modified lobe profiles that have been developed by machine shops when re-grinding camshafts that provide equal, or better performance.

The final, and most visible differentiating component is the iconic cold air box, complete with an accordion air duct fastened to the front that directed air into the carbs from the grille. Once again, the marketing savvy of Donald Healey was displayed on this component, with a plate prominently attached saying “This car has been fitted with a ‘Le Mans’ modification kit.”

The original cold air box was fabricated from sheet aluminum, about 0.050 inches thick, and had two steel plates with welded nuts attached to it using eight aluminum flush rivets for mounting to the carburetors. Originals often show extensive cracking of the aluminum radiating out from the rivet holes. Reproduction boxes are often fabricated out of heavier aluminum, some even using 1/8-inch thick aluminum box extrusions.

There are two additional features in the engine compartment. Underneath the shroud on the carburetor side, the support that comes up from the chassis will have been bent outward to provide clearance for the cold air box, with a replacement bracket, having a correspondingly longer reach, used to connect across to the shroud.

In addition, on many 100Ms the bottom portion of the left cross brace in front of the radiator, visible through the grille, would have had the lower right leg slightly bent upwards at its center so that the camshaft could have been changed through the grille opening without requiring the engine to be unfastened from its mountings so it could be raised and shifted slightly towards the left side of the car. Though this was once the secret key to identifying 100Ms, a story from one of the workers who actually worked on the conversions suggests that the procedure may not have been the same on each car that went through the Warwick conversion process and the degree of X-brace bending could vary.

Finally, on the exterior of the car, the distinctive leather belt should be in place. These are readily available today in the aftermarket, so it isn’t so much a distinguishing feature as it is a desirable feature, but was certainly another example of DMH’s flair for making these cars distinctive and sporting in appearance.

The knowledge of what constitutes an original component, and how to tell one from an aftermarket replacement or poor reproduction, is certainly worthwhile when purchasing a car that is presented as a 100M With demand for rare and original cars growing, the existence of real original components should enhance the value of any Hundred, 100M or not.

What Does All This Add Up To?

The most important aspect of this story is what it tells us about how cars were made in England in that period. Rather than making the chassis and bodies of many of its models, BMC would farm out that aspect of the work to an independent chassis company – in the case of the BN1 and BN2, Thompson Motor Pressings – that would ship the chassis to a body maker – Jensen of West Bromwich – that would fit the body panels, paint the body, and trim the interior before sending the body by truck to the BMC assembly plant in Longbridge. Because the A90 engines were shared with other BMC vehicles, they were made at Longbridge, or a Morris plant, and along with the appropriate transmission, would be mated to the rolling body/chassis.

In instances where some major modification was to be made, whether the fitting of a commercial body or installation of sports tuning modifications, the car might be sent on to yet another enterprise for that fitment.

In addition, we can see that Donald Healey was not only an accomplished and inspired car designer, and an experienced competitions team manager, but also exceptionally well attuned to the interests of his
On the other hand, a car might have no longer present. This was evident in his use of both the louvered bonnet with leather belt and the high-quality tuning kit to upgrade the Healey 100. Of course, this upgrade process was used first in his own aftermarket tuner activities (much like Roush does today with Mustangs) and later in his development of the 100M modifications for use within the BMC production process (a bit like Carroll Shelby—who may have learned some of his wiliness from DMH while driving for him in the early stages of his career).

We also know that the emphasis in that pre-computer age was on getting the work done, rather than keeping accurate and comprehensive records. Cars were tracked on the assembly line with index cards filled out by hand and then filed in file boxes, and the cumulative production records were maintained by hand-copying the data from each build card into a ledger book at the end of the line. Both Anderson and Moment have seen microfilm copies of the original build cards, and Anderson, as a special favor, was once shown the actual original ledger books kept in the archives at British Motor Industry Heritage Trust, almost akin to seeing and touching an original copy of the Declaration of Independence.

But the bottom line to all of this is that today there is a monetary consequence.

The problem with this is that almost three-quarters of a century later, as deep-pocket collectors have discovered that high-quality original automobiles can be a worthwhile and ego-satisfying form of investment, the paucity of original records means that there are some severe discrepancies in collector values.

On the one hand, Healeys that can be proven by the factory records to have been part of the set of 640 cars that went down the Longbridge production line with louvered bonnets already installed, and most likely (though not necessarily) were subsequently given the Le Mans modifications at the Donald Healey Motor Company in Warwick, escalate in value every year, with increasing demand and a very limited, fixed supply. This can be true, even if most of the components that made up the original modifications are no longer present.

On the other hand, a car might have all its original components, with all the original hand-done and alternative markings, but through the vagaries of human record-keeping errors, not have been recorded in the files, and thus would not be accepted as being a “true” 100M.

In addition, all of those cars for which the dealer or original owner bought one of the 1200 – or whatever the original number was – P.280 modification kits and had it installed before, during, or after the time when 100Ms were being produced, are considered to be worth a much smaller premium over a standard Healey BN1 or BN2, simply because there’s no written factory documentation of the provenance of the kit installation. Even owners of BN1s that had the modifications made by Donald Healey himself in the old Healey works Quonset hut near the Cape pub in Warwick are pretty much out of luck, since being without the BMIHT documentation these cars aren’t recognized by professional appraisers and their collector clients as 100Ms.

Efforts have been made to give the term “Healey with Le Mans Modifications” more respect, through the establishment of a registry that recognizes the historic and performance attributes of the entire class, but this hasn’t made much of a dent in market attitudes.

Of course, for those enthusiasts who simply enjoy their Healeys because of the way they look, and ride, and perform, it is as easy today to upgrade a BN1 or BN2 to Le Mans specifications as it was in the production period. A fresh camshaft can be ground to high-lift specifications, different advance springs can be fitted to the distributor, and H6 carburetors with matching intake manifolds and high-compression pistons can be fitted to the engine, with a consequent marked improvement in performance. Should one desire, a good reproduction of the original cold air box, complete with reproduction tag can be fitted to the engine, and a louvered bonnet, leather retainer strap, and two-tone paint job can be added to complete the tribute to the original cars.

Unfortunately, what one cannot do is turn the car into a 100M. That term, for better or for worse, is reserved for only cars that can be “documented.” The rest of us can simply watch members of this wealthy strata of the marketplace bid against one another for the privilege of bragging about the specialness of their cars. Those individuals who were fortunate enough to find a 100M while they were still less well-known, or their heirs, can take some solace knowing that their lucky stars might pay off some day, though eventually some portion of this value might go the way of Pontiac GTOs and other cars with inflated valuations.

For the rest of us, we can sit on the sidelines and comment on the phenomenon, while enjoying the story.

My thanks to Roger Moment and Lynn Martin for their comments and contributions to assembling and writing this article. For anyone who is interested in a first-hand account of the very core tale in this story, an Internet search on “1953 Le Mans Gordon Wilkins” will produce the article that Wilkins wrote on his experience as one of the Healey drivers of the very first Healey 100 Le Mans cars that gave rise to the rest of the story.