BONNEVILLE BANTER

Monthly Newsletter of the Bonneville Austin-Healey Club

March, 2011 www.bonnevillehealeyclub.org **Vol. 28 No. 3**

Presidents Message:

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to heaven, we were all going direct the other way. . . ”

Charles Dickens (1812-1870) *A Tale of Two Cities*

That’s referring to the late 1700’s, yet it seems a lot like our current times. We have protests all over the country and all over the world. Egypt, Libya, Bahrain, Yemen, Tunisia, Oman and perhaps more of the Arab countries protesting for regime change, better lifestyles and jobs. It seems to be more widespread than in past uprisings or is it because we have better reporting and visibility?

In our country, instead of a focus on jobs, we have governors settling political scores. They are trying to eliminate “collective bargaining” and the protests have begun. We see this in Wisconsin, next will be Ohio, Indiana, Virginia, Texas, New Jersey, Florida and I’m sure other states to follow. I hear Rhode Island is considering firing all their teachers!

Next, we will be having the “government shut-down.” Are we all going “Crazy”?

Maybe we appreciate our Healey’s for more than nostalgia, but I for one like to get in our Healey to go back and “…remember when.” Perhaps we were all quite naïve during the 1950’s, but at times I wish we could go back to the 1950’s. They truly were Happy Days. Or, so it seems.

Keep ’em rolling,

Ann

FROM THE EDITOR:

The weather is finally beginning to warm up. Have you had your Healey out of the garage and onto the road yet? Looking at the schedule of events for the month of March all that is scheduled is a meeting and a tentative Tech Session. “**Bright Idea**” If your Healey needs some cobwebs removed before you are ready to go on the Golden Spike trip, come to the meeting on the 8th and get on the schedule for the Tech Session.

In this issue is a reprint of an article from the January 1957 ***Sports Cars Illustrated***. The Magazine was loaned from the collection of Craig Mossberg. The article covers the MG record attempts of 1956, but also covers the Austin Healey runs on the Bonneville Salt Flats. The article lists Donald Healeys two way time as 200.9, but other publications show that his time was 203.11. Whatever, I have heard that Donald carried his laminated 200 Mile per Hour card everywhere, and proudly displayed it to anyone who asked. Also the picture on the mailer page comes from ***Sports Cars Illustrated***.

See you on the 8th, and hope you are making plans to watch Steve Pike attempt to surpass 200 MPH this fall in his beautiful re-creation of the 1954 Austin Healey Record car.

Happy Healeying,

Dave

Bonneville Austin-Healey Club

2011 Activities Schedule

MARCH

Mar. 8, Meeting @ Joe Morley's.
Tech Session TBA.

APRIL

Apr. 12, Meeting@ Red Robin.
Apr. 17, Trip to Golden Spike.

MAY

May 10, Meeting @ Joe Morley's.
May 21-22 Trip to Lehman Cave & Baker UT.

JUNE

June 14, Meeting @ Red Robin.
Tech Session TBA.
June 18, Day trip, East Canyon to Taggerts,

JULY

July 3-8, AHCA Conclave in Colorado Springs, July 12, Meeting @ Joe Morley's
July 29-31, Healey Days, Park City.
Jim Revel & Kevin Cowan arranging.

AUGUST

Aug. 9, Meeting @ Red Robin.
Aug. 13,British Field Day.
Aug. 27, Utah Concours @ Thanksgiving Point Gardens.

SEPTEMBER

Sept. 13, Meeting @ Joe Morley's.
Sept. 14-17,World of Speed.
Sept. 23-26, Trip to Grand Mesa, CO. Don Colman.

OCTOBER

Oct. 7-9, Fall Trip toJackson Hole.
Oct. 12, Meeting @ Red Robin

NOVEMBER

Nov. 8, Nominations Meeting @ Joe Morley's
Tech Session TBA

DECEMBER

Dec. 3, Christmas Party, TBA.

BONNEVILLE AUSTIN-HEALEY CLUB

2011 OFFICERS

President: Ann Lewis: 801-255-8161
8226 Bryce Dr., Sandy, UT 84070
CorrigA9@msn.com

Vice President: Don Colman: 801-942-5259
6866 Pine Rock Road, S.L.C., UT 84121
oldnamloc@msn.com

Activities Chairman: Jim Revel: 435-640-3347
2040 Mahre Drive, Park City, UT 84060
jimrevel@aol.com

Treasurer Sandy Maxwell: 801-943-4803
1752 Paulista Way, Sandy, UT 84093
sanddmax@q.com

Secretary John Morrison: 801- 277-4835
5009 Holladay Blvd., S.L.C., UT 84117
Slomo100@sisna.com

Membership Jim Thornton: 801-485-9404
3503 Millcreek Cir. SLC, UT 84106
jimt@secten.com

Newsletter Editor: Dave Maxwell 801-943-4803
1752 Paulista Way, Sandy, UT 84093
sanddmax@q.com

Webmaster: Jon Hanson 801-583-7512
1375 Roxbury Rd. S.L.C., UT 84108
jmh-consulting@earthlink.net

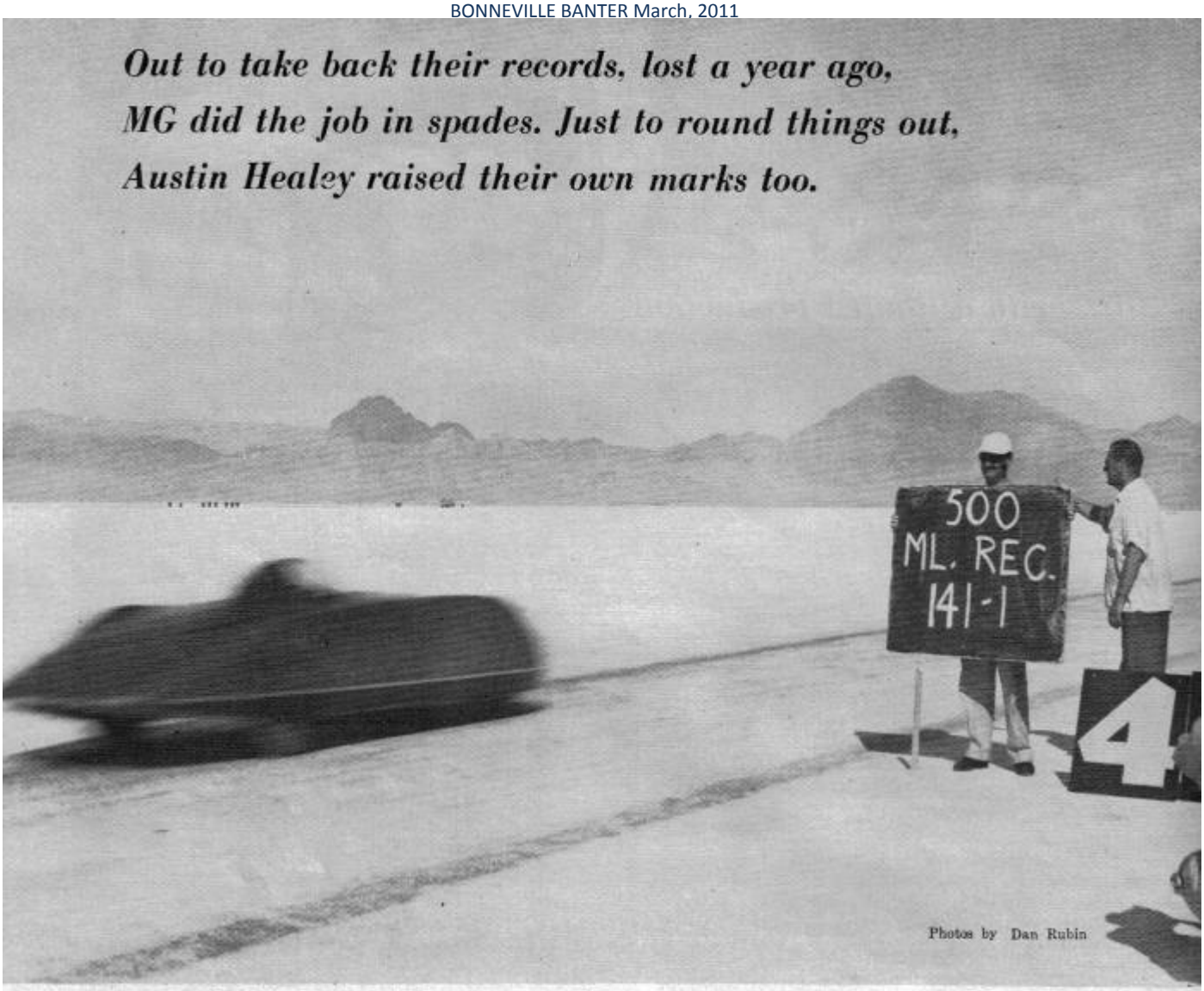
AHCA Delegate: Dave Maxwell 801-943-4803

Welcome

New Members
Bob and Pat Markman

The Markman's 1966 Healey 3000

Out to take back their records, lost a year ago,
MG did the job in spades. Just to round things out,
Austin Healey raised their own marks too.



Photos by Dan Rubin

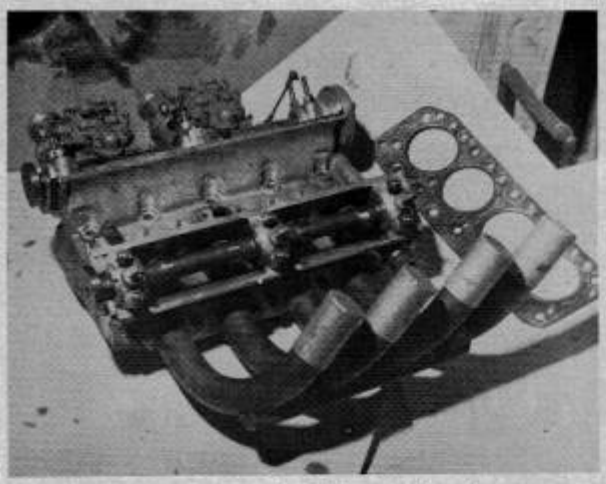
EX 179 howls past the happy MG crew as the 500 mile record is racked up. Lines marked in salt guide cars around big circle.

EX 179: the MG that rewrote the record books

LAST August, in their share of what is probably the busiest season the salt has even seen, the British Motor Corporation established 88 new national and international records in classes F and D with MG and Austin-Healey cars.

In spite of the fact that the present BMC organization has more practical experience in record breaking than any other firm in the world, this session was a succession of frustrating incidents. First, the Austin-Healey straightaway streamliner shed a blower drive chain on a practice run. The first attempt by MG on the 12-hour record was halted after six hours by mechanical difficulty. Then, when the Austin-Healey distance car attempted the six-hour record, fuel troubles caused this run to be postponed also. In addition to these difficulties, conditions of the salt were far from good with the ever-present threat of rain.

Wendover's air-conditioned cafe is the chief gathering place for off-salt hours. Here, in only a few hours, you become aware of the tremendous amount of automotive know-how available to BMC—Captain George Eyston, who has devoted his life to record breaking; Alec Hounslow, with more than thirty years in the MG racing and experi-



Just the thing for your MGA. Always referred to as "experimental", the twin-cam MG head is rugged and simple. Tuned exhausts are fine for the flats.

mental department; Geoffrey Healey, Donald Healey's son, who has, of late, had more than a little to do with the experimental development of Austin-Healeys; Johnny Lockett, world-famous motorcycle rider who has driven Austin-Healeys and MG's so impressively at Le Mans, and some of the finest of America's driving talent in the persons of Ken Miles and Carroll Shelby.

On Sunday, August 12, the 1500 cc MG made its first attempt for the 12-hour Class F record with a target speed of something over 140 mph. Concern had been expressed over the condition of the salt which was never too stable at best. If the salt was wet, it meant pit stops to break loose the salt that would pack up in the fender wells—and pit stops cost time.

If the course deteriorated in one section, it meant that speed would have to be higher over the remainder of the course to maintain the necessary average. On this morning, Ken Miles took the opening session of three hours beginning at six a.m. Not yet too light at this hour, the only thing that seemed real was the sharp crackle of the exhaust as Miles moved off.

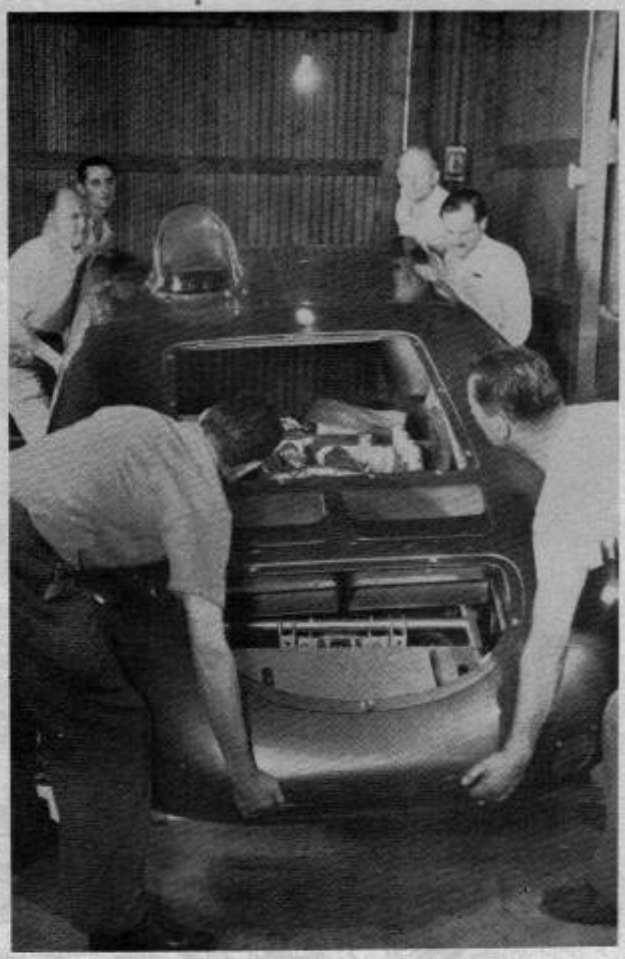
Three hours passed with the speed well above what was necessary to break Bettenhausen's 1955 record in the OSCA special. At a few moments after nine o'clock Johnny Lockett took over and not even the most tense or critical ear could pick up a sour note that would give warning that this engine wouldn't run forever.

As noon approached and Miles prepared to relieve Lockett, the unforeseen happened. A rear wheel bearing let go, allowing the axle to drift out of the housing. Lockett reported that he had just caught the first hint of burning rubber when the revs mounted due to the spline in the axle leaving the differential carrier.

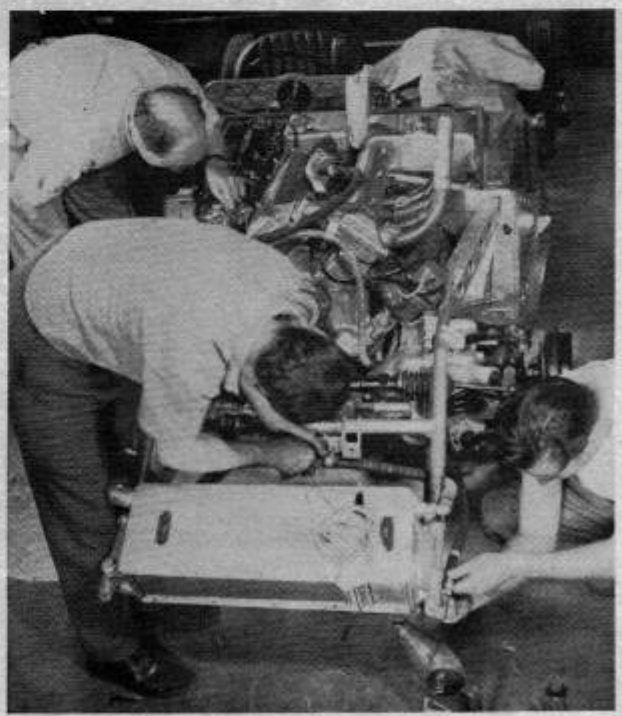
The rear-wheel well skirt was all that had prevented the wheel and axle from leaving the housing entirely and this had been responsible for the smell of burning rubber. Six hard-earned hours of record speed were wasted as far as the twelve-hour goal was concerned and the engine that a few minutes before had only a little over six hours to run now had an additional twelve.

On Monday a new course was prepared (under the supervision of Captain Eyston) for the Austin-Healey Class D distance run of six hours scheduled for Tuesday. Tuesday did not dawn bright and clear. A few scattered drops of rain only a few moments before the six o'clock start seemed to promise more rain before the day was over. In fact, the grey veil of a rainstorm obscured the horizon to the east.

At six o'clock on the dot the car started its run. The



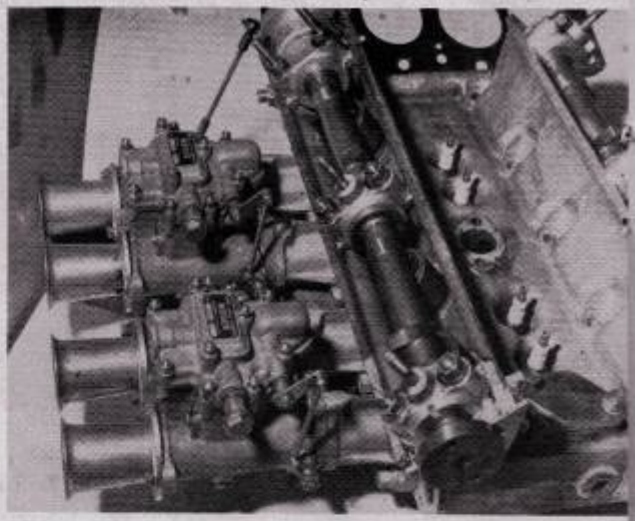
The chassis is ready and the crew lowers the self-supporting body in place. Twin ducts carry air up and away from the oil and water radiators.

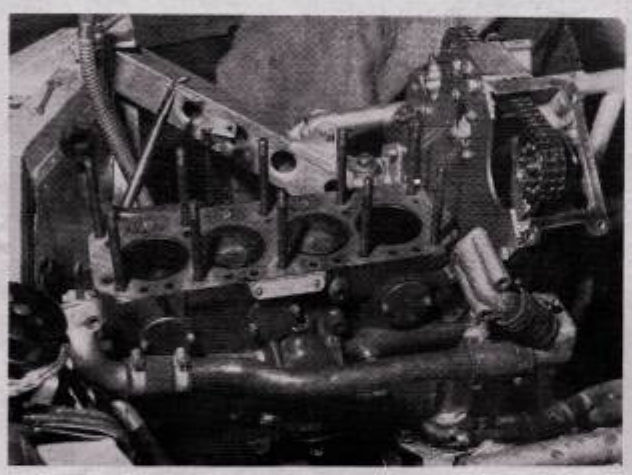


Oil cooler connections are potential trouble sources, and get last-minute checking here. Low front radiators require reservoirs at cowl.

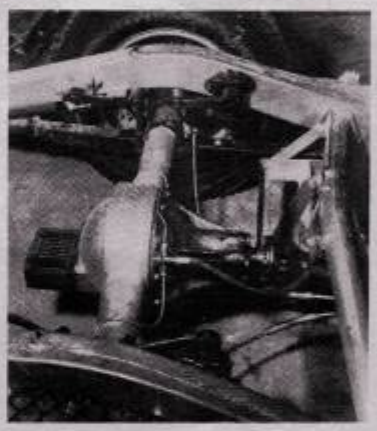
Cam drive is two-stage, by gear and chain. Large-capacity water pump has engine-speed belt drive, and special ignition angles to right.

Shroud-type cam followers are used in the MG record engine, which also carries 40 mm Webers. Throttle linkage is simple.





Construction of cam drive is still a tool-room job. Special water circulation system has tiny block holes, keeps cylinders warm and head cool.



Adjustable Andrex shocks are added to lever types. Axle oil radiator is competition must.

exhaust note of the new six-cylindered engine was noticeably different from that of the MG four that had run two days before. Even with this difference, at the start of the second lap an untrained ear could detect that all was not well in the six-cylindered department. Another lap brought no improvement in its health and the run was called off. After a considerable amount of feverish pit acitivity, the run was started again, but for the second time was called off. Difficulties with the fuel, or fuel system were described as the cause of the trouble and the run was postponed until Friday.

Wednesday saw the 1500 cc, Class F, MG back on the salt for an early start. This time nothing untoward happened and all Class F records up to 12 hours were taken at an impressive speed, with improvement over Sunday's record.

Four days later this car, with the sprint engine, established a new ten-mile flying start record of 170.15 mph under the piloting of Johnny Lockett. This year, MG earned everything they got and a lot of credit should go to Hounslow and his crew for the preparation and to the two drivers, Miles and Lockett, who apparently never made a mistake and were so proud of the car that you'd think they had built it.

The chassis and body of the MG are not new although the engine, which will be discussed later, is of new, experimental design. Incidentally, this engine received no more than a tappet check between the end of its six-hour run and the beginning of the second run of 12 hours.

Externally, this car bears more than a little resemblance to the record car used by Goldie Gardner and it is a further development of the EX 179 that set the 12-hour Class F records in 1954. At that time, it used a well souped 1500 cc rocker-box engine. This time there was a considerable difference in the engine type.

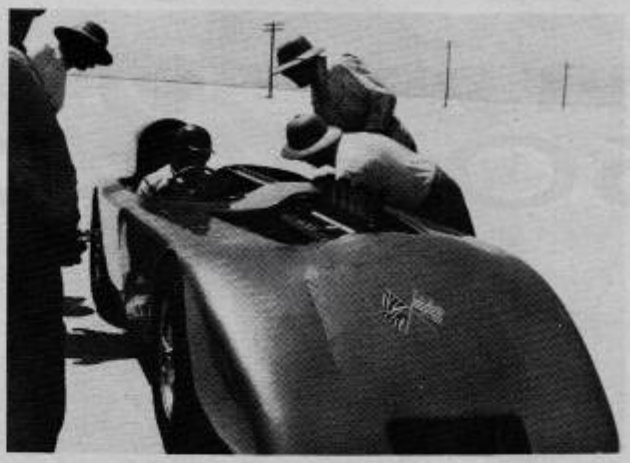
The chassis consists of two 14-gauge box-section side members that are actually prototype MGA units. The main firewall bulkhead is built in unit with the frame and triangulated with additional perforated box sections to insure rigidity and adequate frame stiffening. A tubular extension to these main side members is used to carry the radiator and oil cooler.

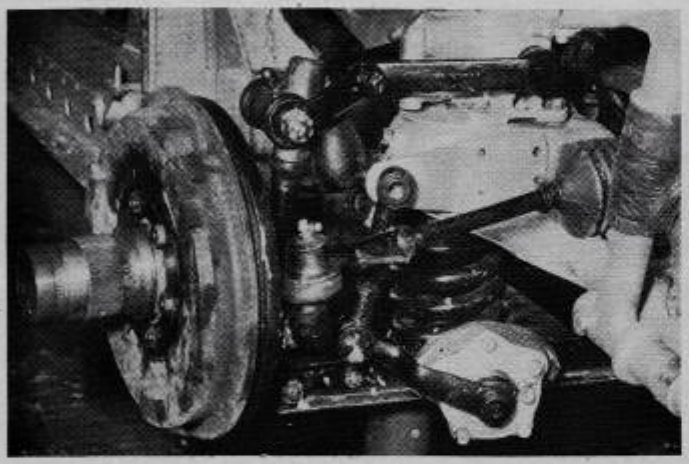
The rear axle layout is a straightforward Hotchkiss drive. It is attached to conventionally shackled semi-elliptic springs by U-bolts. These springs are heavily taped and four shock absorbers are fitted. Straps are also provided to snub rebound. A small oil cooler is fitted to the rear of the differential casing. It's interesting that this is located in such a manner that air currents from up-and-down movement of the rear axle are used instead of any direct flow from the outside. Straight-cut gears are used for ring and pinion

Standard MG suspension and brake components are used in EX 179, as below. Andrex shock is mounted as in old TD-Mark II, on lower arm.

Cockpit of Austin-Healey streamliner on lower right is fitted out for both safety and comfort. Manifold pressure gauge reads to 30 psi.

The Healey saltbuster, at right, is a fearsome sight as it poises for run. Shape is clean, but flat flanks may be sensitive to side winds.





instead of the more normal spiral or hypoid types. Although noisier, straight gears do simplify bearing and lubrication problems.

Front crossmembers similar to the TF MG carry standard suspension components of coil springs and "A" frames. Steering is by MG rack and pinion. In addition to the hydraulic shock absorber incorporated in the upper "A" frame, another of the friction type is used. Standard hydraulically-operated MG brakes are fitted to all four wheels. The body framework, which is made up of small round tubes and perforated square section tubes attaches to the chasssis at 14 points.

In order to avoid complications in removing the body, all the instruments are carried on an instrument panel attached to the main chassis frame. Attached to and removable with the body are the air ducts that carry air from small intakes in the front to the cockpit and the carburetors.

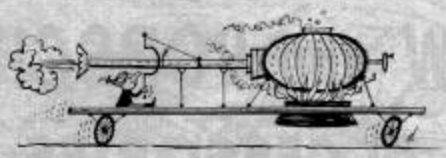
The body shell is made of 18 gauge half-hard aluminum and is fully streamlined. A plastic bubble covering the driver's side of the cockpit is incorporated with the head faring. This helps insure that wind resistance and drag are near the absolute minimum. The driver's position in the cockpit is on the right hand side. This is a change from the original EX 179 made necessary by the new engine installation. With the experimental engine the stubby exhaust pipes project from a hole in the left-hand side of the engine compartment and it was necessary to get the driver out of the exhaust stream. The left-hand side of the cockpit is completely taken up by the 34.5 gallon fuel tank. As would be expected with a distance record car, the driver's accommodations are comfortable. Not much space is wasted however—the steering wheel even being of a special shape to clear the driver's legs.

The bellypan that completely encloses the underside is made of 14 gauge half-hard aluminum and serves as a cockpit floor.

The four-cylindered engine, never mentioned without the addition of the word, "experimental", seems to be pretty rugged and reliable. The block and crankshaft are the production B type units; the bore and stroke being 73.025 mm x 89 mm (2.87 x 3.5 inches). The block is very short and rigid and the practice of extending the crankcase casting well below the center line of the crankshaft contributes a great deal towards bottom-half strength.

The three main bearing crankshaft is a steel forging with main bearings of two inches diameter and the crankpin journals, 1.875 inch. It has balance weights on each side of the center main bearing and one on the inner side

(Continued on page 62)



Carriages Without Horses

WHEN a turbine-powered Renault hit 191.2 mph at Bonneville, many enthusiastic individuals heralded it as proof of the arrival of the ultimate in transporting the human frame from one point to another. The more cautious, however, wrote it off as just another step in the search for a satisfactory method of propulsion.

The same claim, they pointed out, was made for the electric, steam and gasoline engines, all of which proved adequate even if limited. And some of the earlier solutions were neither as successful nor as practical.

In 1600, for instance, the Dutch came up with a two-masted vehicle capable of seating 28 passengers and reaching 20 mph. And memoirs of pioneers crossing the American continent as late as the mid-1800's frequently comment on seeing wheeled sailboats on the prairies of the midwest. Although the economy of this system cannot be disputed, perhaps it is just as well that it never achieved wide acceptance. The thought of seeing a field of Ferraris and Maseratis swirling around LeMans under full sail is somehow unnerving.

Then Sir Issac Newton felt impelled to focus his inventive genius on the problem. In 1680, he designed a vehicle that skirted the edge of the theories later used in steam and jet propulsion. In essence, his power plant was a huge, water filled globe with a tube pointing rearward. When a fire beneath had brought the water to a suitable temperature, movement was to be achieved by opening a valve and letting out a blast of steam. Fortunately none of these machines was ever produced – as a snappy, two-seater sports version would have been about the size of a city bus.

Next were the windmills (which provided the power for cars) designed by a Frenchman named DuQuet in 1714 and J. H. Genevois, a Swiss clergyman, in 1760. At one time, the British government displayed great interest in the latter machine.

In 1820, one W. Cecil read a paper before the Cambridge Philosophical Society describing his brainchild. By using a combination of hydrogen and air, he intended to create a vacuum in a cylinder. Then, he assured his spellbound listeners, outside air would push against the piston, forcing it down and turning the wheels in a sort of reverse internal combustion process.

Six years later, Samuel Brown used the same principle – substituting commercial alcohol for hydrogen – in a vehicle that actually trundled about under its own power.

But the sweep and scope of design imagination didn't reach a peak until 1867. In that year, two eager inventors named Otto and Langden startled Parisians by displaying a free-piston engine. In theory, an explosion at the base of a huge, upright cylinder forced a heavy piston upward in unimpeded flight. But coming down, the piston engaged a rack that turned a set of gears connected to the wheels. The piston was then supposed to force the burnt gases out, compress the fresh air and start all over again.

By 1894, a vast majority of those in the field were concentrating on steam, electricity or gasoline. But included among the entries in the Paris-Rouen race of that year were vehicles with power supplied by systems of levers and pendulums, gravity, hydraulics, and weight of passengers and compressed air – the latter being an idea cooked up by an American named Hartley.

Nor did strange attempts to supply a solution die out with the advent of the present century. Obviously, if there was something to be said for both electric and gasoline buggies, twice as much could be said for a combination of the two. Consequently, motoring enthusiasts of 1918 were offered the Woods Dual Power, which contained, in addition to batteries and an electric motor, a four-cylinder gasoline engine that turned a generator which supplied current to the batteries that powered the car.

And while the engineers of the outside world worked diligently on various approaches to the problem, Russia announced, in January of 1955, that they had perfected an atomic-powered car. Coming from a nation that modestly admits to having invented everything but Adolf Hitler, this failed to create the excitement it might have.

— *Jim Mourning*

Record Runs —

(Continued from page 37)

of both the front and rear mains. The H section connecting rods are tempered steel forgings of the same quality steel as used in the crankshaft. They're of slightly thicker section than the production connecting rods. This extra thickness is probably gained by slightly blocking open the dies during forging.

Following the practice of keeping the engine as short as possible, the connecting rod journals are offset in relation to the cylinder bores. Both the end connecting rods, number one and four cylinders, are offset outwards and the two inner rods are offset towards the center of the engine. The big ends of the connecting rods are split diagonally to allow each piston and connecting rod to be removed by pushing it upwards out of its bore. Forged aluminum three ring pistons establish a compression ratio of 9.2/1.

The light alloy two-cam head carries each camshaft in three plain bearings. The intake and exhaust valves are disposed at an included angle of 80 degrees. Ferrous valve seat inserts are used. The valves are actuated directly from the camshaft through cups that are fitted over the coil springs and valve clearances are effected by means of an adjustable pad contained in the end of the cup.

The cam tower is separate from the head and bolts up to the block in the same manner as the stock timing cover. Primary cam drive is by means of gears from the crankshaft. This cuts down the secondary drive, which is by chain to the camshafts, to half-engine speed. Reducing both the length and the linear speed of the chain is an important consideration in a high revving engine.

The Lucas magneto is driven by means of a skew gear from the front of the crankshaft. Two dual throat Webers supply the carburetion and are fitted with ram tubes that pick up the air from a balance box. One hundred bhp is claimed for this engine used for the straightaway runs red-lined at 6000 rpm. The sprint engine used for the straightaway runs is identical to the distance engine, with the exception of a higher compression ratio necessary to run on an alcohol mixture.

Whereas MG used one car with different engines for their distance and straightaway records, Austin-Healey brought two complete cars. Since both

these cars have basically the same engines of rumored prototype design, it would be well to discuss them here before taking a look at the cars. Of six-cylinder, pushrod-operated overhead valve layout, the block and cylinder head are cast iron.

The bore and stroke of 79.4 mm x 89 mm (3.125 inches x 3.5 inches) give a capacity of 2639 cc's (161.61 cubic inches) and a piston area of 46.2 sq. inches. The head is of Weslake design and has the now famous heart-shape combustion chamber. The intake ports are siamesed as are the exhaust ports for the inner four cylinders (two-three and four-five). The engine of the distance car uses a compression ratio of 9.3/1 and runs on premium fuel.

Carburetion is by three dual throat Webers. The exhaust system utilizes split headers that collect the exhaust gases from cylinders one, two, three and from cylinders four, five, six. This engine develops 150 bhp at 5000 rpm on gasoline.

In the streamlined straightaway engine the Godfrey K-300 supercharger is chain driven from the front of the crankshaft. A single SU carburetor is used. Three hundred bhp at 5000 rpm is claimed for this engine on a specially blended alcohol fuel.

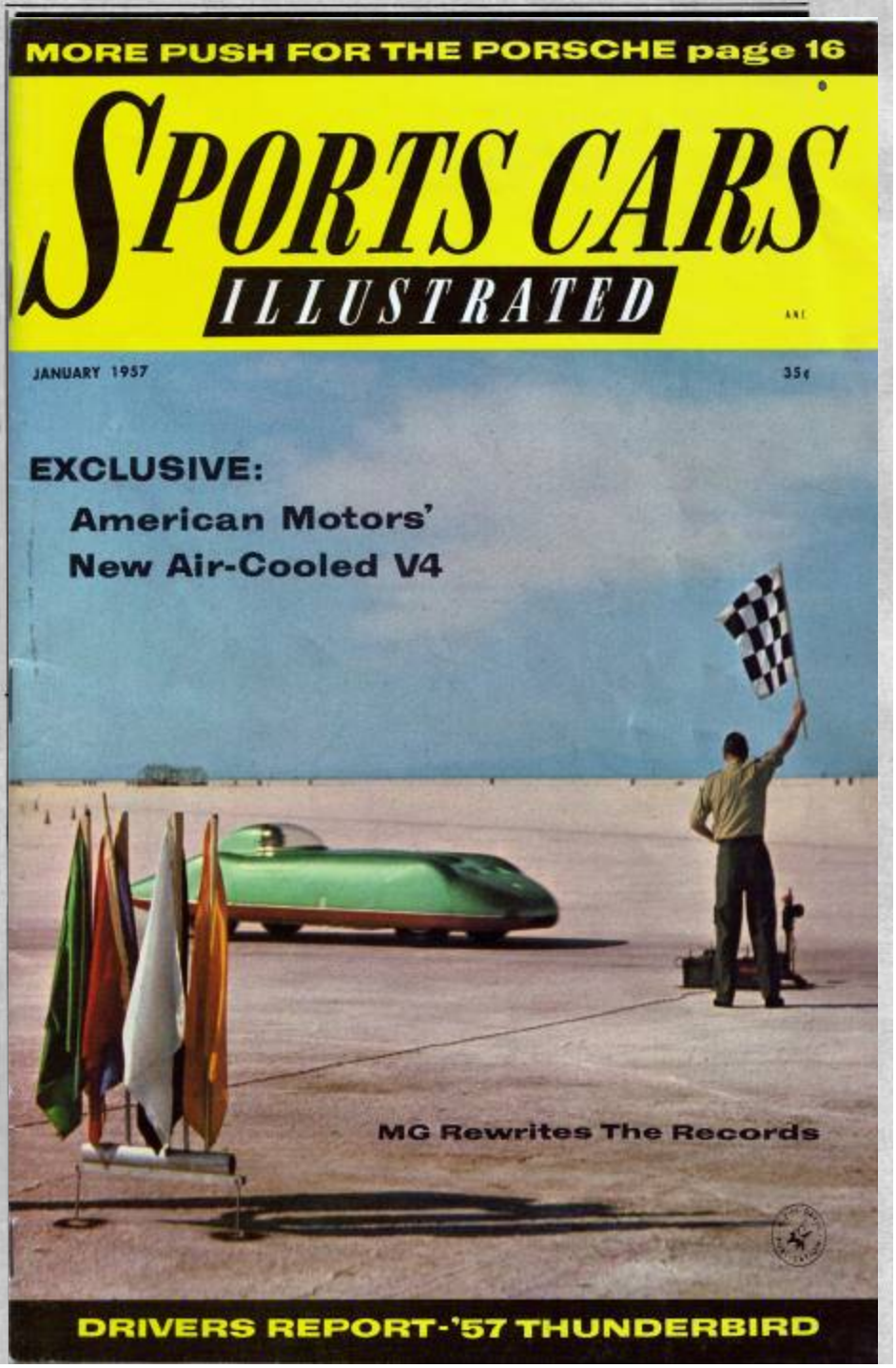
The Austin-Healey distance car, which on Friday after its earlier difficulty, set new six-hour records at over 145 mph, is quite interesting in that it is fully road-equipped. It has a standard electrical system including headlights and tail-lights. Dunlop disc brakes operate on all four wheels. The passenger's compartment, although covered with an aluminum tonneau cover for the record runs, is actually suitable for carrying a passenger.

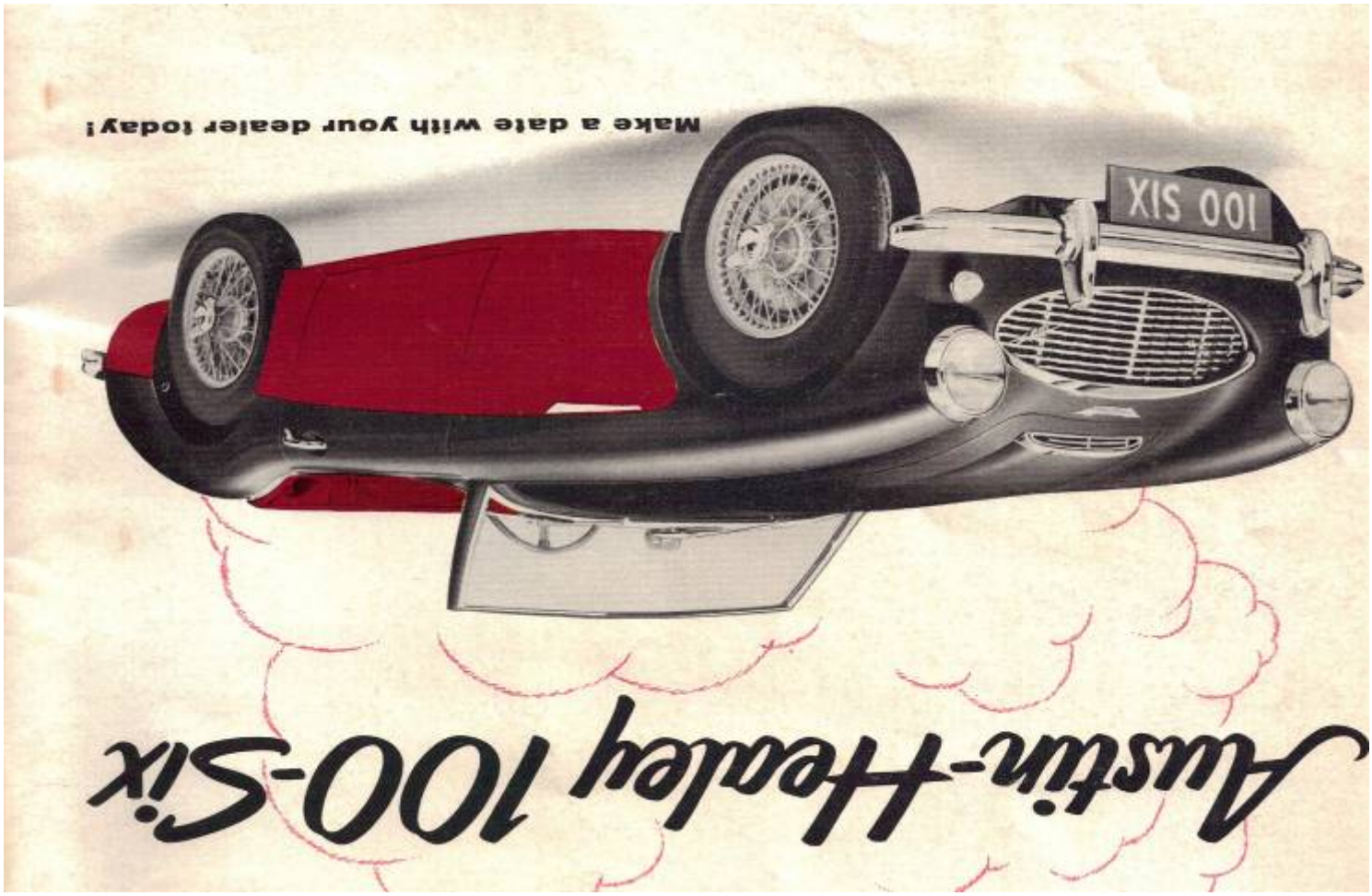
The car claims a basically Austin-Healey 100 chassis and body, although the body has been extensively modified at the nose and tail to improve the streamlining. The long nose is reminiscent of the Mondial Ferrari and the lengthened, streamlined tail carries a large faired headrest. Dunlop knock-off disc wheels and 6.50 x 16 Dunlop racing tires are used. The gearbox is a standard four-speed Austin-Healey unit without overdrive. A final-drive ratio of 2.7/1 representing a speed of 31.75 mph per 1000 rpm or about 160 mph at 5000 rpm was fitted.

The straightaway car uses an Austin-Healey 100 chassis with standard wheelbase, ground clearance, and track dimensions. The body follows the usual streamlining practice and the cockpit is cowled to enclose the driver. It is equipped with Dunlop disc brakes, knock-off disc wheels, and Dunlop racing tires. A David Brown four-speed gearbox, incorporating overdrive, used in conjunction with a final drive ratio of 2.466/1 gives a speed of 43.50 mph per thousand rpm in top.

On August 21st this car was driven by Donald Healey to a two-way average of 200.9 mph for the flying mile. This was not a record attempt, a certified run of substantially over 200 mph being desired by Donald Healey.

All in all this was a record session that BMC can be proud of. The MG succeeded in establishing an impressive number of records at fantastic speed for a 1500 cc engine. The Austin-Healey distance car came through very well by establishing the records needed to put the marque in possession of every record from one mile to 3000 miles.





BONNEVILLE BANTER
Dave Maxwell, Editor
1752 Paulista Way
Sandy, UT 84093-6850