# LOOSE FILLINGS

## AIRCOOLEDS AT EASTERN CREEK

Through Gary Simkin, the classic motorcycle people invited us to Eastern Creek in early February, and (again thanks to Gary) we had a fine roll-up which included the highly original ex-Peter Hill, ex-Brian Lawler late-'50s Scorpion Vincent which Col Davidson brought out for the first time in many years.

Also on display were: JMW CZ 150cc - Mike Bendiech; Cooper Mk IV JAP 500 - Matt Segafredo; Cooper Mk V Norton - the Hallidays; JBS Norton - Gary Simkin; Sidney Vincent - Cameron MacMillan; Walton JAP - Terry Wright; Morgan JAP 1200 three-wheeler - Paul Armstrong.

The Hallidays also had their ex-Brabham V-twin midget on show, and another historic speedcar was Ron Ward's rubber-mounted transverse twin with Red Hunter heads and special barrels on a Harley crankcase.

## GOOD VIBRATIONS

*"Loose Fillings" continues to find enthusiastic readers, and to attract excellent articles on a wide range of subjects related to the history and operation of air-cooled racing cars. We will soon need to decide on a regular publishing frequency, maybe three-monthly, maybe two-monthly. Again for this issue we have had to hold over interesting and well-illustrated articles. Meantime, thanks to the many readers who have contributed to the success of this newsletter by sending a book of stamps to Gary Simkin. It all helps.*

## AIRCOOLEDS AT ROB ROY

from David Halliday

Don Halliday was invited to take the Brabham V-twin to Rob Roy on November 27/28 for MGCC's historic meeting. In 1951 Brabham won the Australian hillclimb Championship and set a new record at Rob Roy with this car.

The only problem was that a fire-extinguisher had to be carried, and there was no room except on top of the steering box, under the dash. Because #28 doesn't have a CAMS log-book there had to be a pace car, which in this case was a replica D-type. I was push-started on the dummy grid

*Continued on p 2*

**Left: Peter Hill in Scorpion, Catalina sometime 1961-2, chased by Phil Boot in the Cooper-BMW. Below: as seen at Eastern Creek recently.**

## AIRCOOLEDS AT WAKEFIELD PARK

HSRCA's March 25-26 meeting will include a regularity event for pre-'50s racing cars and air-cooled cars.

Cars in regularity events do not need log books, and drivers need a much cheaper, simpler licence and clothing. This is an ideal way to get an air-cooled car and an inexperienced driver onto the track.

You can get more details from HSRCA, phone 02 9907 6644.

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and the Jaguar would be at the start-line. They made sure the Jaguar was well out of sight before I arrived at the start (above).

The first corner is a right-hander, Tin Shed corner (below), that changes camber and you can't see where the road goes so

you must follow the edge of the track. This is the most important part of the track to get right, I was told. This corner had me a bit worried because of the offset diff and the experience I had with the car at Yass

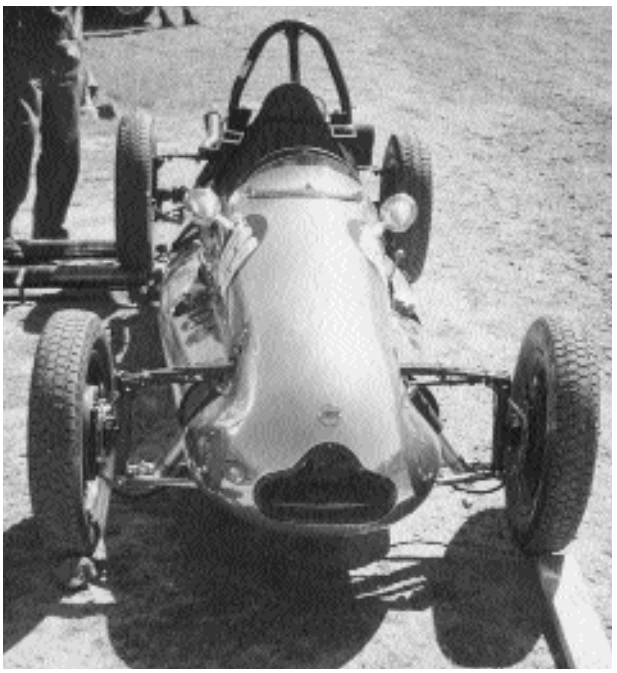
speedway's right-hander, but at Rob Roy there were no problems because the car wasn't going fast enough. After Tin Shed there's a slight downhill run (above) across a causeway with a dam on your left. Now the climb really begins, as you enter

Skyline corner, the steepest part of the climb, and then it's a left hand turn all the way to the finish (above).

Our tappet problems returned again on Saturday, and the car was still misfiring on Sunday. Mark Dymond was also running with his Mk V Cooper JAP 1100, the car in which John Crouch won at Rob Roy in 1952, and it sounded magnificent. I thought about locking Mark in the toilet and borrowing his engine for the day.

Also running at this Rob Roy meeting was Kalvin Donald's red BSA-powered Newbound 500, which looked very neat, and Col Porter was entered with his 650cc Berkeley.

MGCC were thrilled to have #28 there and watch it go up the hill. I always wanted to run the car there, and we will be taking the car back in 2001 for the 50th anniversary of its AHCC win.



## ROB KIRKBY

Air-cooled racing cars were just one of Rob Kirkby's many unusual passions, but he was a notable figure in the Australian historic air-cooled movement, and it came as a great shock to everyone who knew him to hear of his death, from a heart attack, late in January.

Rob was a member of the NSW 500cc club in the late 1950s. Later, after he had become established as an academic and practising psyc-ologist, he started collecting older racing cars, including Coopers, both watercooled and aircooled. He restored and raced a Mk IV JAP, had another Mk IV in pieces, and imported from the UK the remains of a Mk XI. He was also involved in the preservation of the Tighe Vincent.

Two years ago he moved back to Sydney from Melbourne. He is survived by his wife Loretta and their daughter Nicola.

## BITS AND PIECES

☛ Contact has recently been made with some long-lost names from Victorian air-cooled ranks (although in each case their cars remain lost). One is Max Mouzon, nowadays technical manager with Stihl, who built two cars, one in the late '50s and the other in the early '60s and competed on country circuits. Another is Ron Perry, now living in Wollongong, who in the early '60s hillclimbed the Olev 500, a Velocette-powered 13"-wheel car built by Ross Stewart.

☛ Ross Stewart himself, recently notable for an Austin 7 which ran quarters in 13s, also built the Keros 500, a blown 500 which ended its career (and very nearly its driver's too) at the 1964 AHCC at Silverdale, where it stopped with the front of the car, and the driver's legs, wrapped either side of an eight-inch square post.

☛ In England, 82 y.o. Murray Rainey maintains a Mk 9 Cooper Manx for daughter Joy, who runs it in hillclimbs. Ron Tauranac showed great interest in the Cooper at Murray's last birthday party (this is starting to sound like Eoin Young) and later drove it at Curborough sprints.

☛ The Walton JAP, beautifully restored by Terry Wright, may be one of Australia's most successful racing cars. Nonetheless, he was advised the car would not be suitable for the illustrious Goodwood "Festival of Speed" hillclimb, because "it is rather important that cars are noisy, fast and dramatic. Otherwise...the spectacle is not good enough." Buy an Auto Union, Terence old chap.

☛ Last issue's photograph of the extremely crossed-up Walton, it now appears, was at Rob Roy, not Templestowe.

## THE DONLAND SPECIAL

from Peter Tucker

The Donland Special was originally one of the early Coopers owned by Reg Smith ("Warm Rod," we think). It was bought from Reg by the Leightons, and at some stage of their ownership was wrecked whilst in transit between Melbourne and Adelaide - dropped over a cliff into the sea, we were told!

After being in the sea for some weeks,

the wreck was bought by Don Blair who, with assistance from Ken Clelland, salvaged the Cooper parts and built the Don/land Special.

Specifications: square tube frame with very little triangulation; Cooper-style front and rear suspension, Fiat 500 front uprights, front wheels, hubs and brakes, fabricated rear uprights (Cooper we think), single rear drum brake, Cortina 13" rear wheels, fibreglass and aluminium body. Garth Rhodes has the original wheels but refused to sell them to us.

We are not sure what sort of engine was then used, but it may have been a 650 Triumph. The car was bought from Don Blair by Ian Wells, who stored it for some time. We bought it from him about 1979 and carried out a complete rebuild, fitting a 650 Thunderbird and Burman box. After several months of teething troubles the car settled down (read, we learned how to operate it) and was campaigned by Peter Tucker jnr for about four years - quite successfully, I might add, several trophies being won in that time including the air-cooled trophy from Winton on two occasions.

The car has not run since 1988. However, apart from a damaged gearbox output shaft it is complete. I should point out that the historical info is all hearsay .and has not been documented.

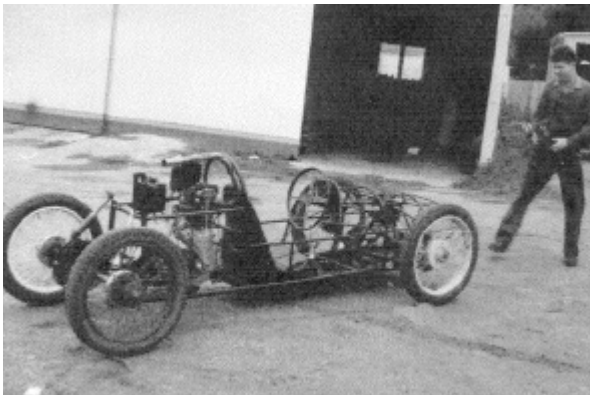
**Left: Mark Dymond's Cooper-JAP**
**Below: The Donland Special at Sandown c.1980 with Peter Tucker jnr driving.**

## FOR SALE

***Donland Special, not run for 12 years but complete, loads of spares, nice healthy 650 Triumph, log book. Dark green. yellow wheels, $6250 o.n.o., Peter Tucker, ph/fax 03 9850 7671***

***Cooper Mk IV 1100 JAP, the most original Mk IV in the world, still in unrestored factory trim. May trade pre'60 racing car with starter motor. $50,000, Mike Gosbell, 02 6651 8141 a.h.***

***Jinx, mid-'60s space-frame wishbone/coil 500 built by Lee Falkenberg with Kawasaki 500cc triple, 13" wheels, good Victorian hillclimb history. Complete. John Bradbury, h. 03 9850 9973, w. 03 9224 3345***



## MYSTERY CORNER

**Top: somewhere in Melbpurne.**
**Bottom: somewhere in Singapore.**
**What are the cars? Ideas to Gary Simkin please.**

## ALCOHOL AS A FRIEND!

from Demon Tweaks

The title is a deliberate attempt to mislead you and get your attention! But seriously, the following few notes are intended to help owners of air cooled cars maximise their enjoyment and minimise their pain!

So where do we start? We are of course talking about the fuel we use in our air cooled (usually rear engined) racers..

There is really only one logical choice, and that is methyl alcohol (methanol), or as a compromise, a blend thereof. The use of anything else, even with alloy head and barrel and low compression, is asking for trouble. So we use Methanol.

We can of course make up blends adding benzol and petrol, but the only real value in doing so is to produce a fuel with a lower consumption rate. In a few very unusual situations this might be necessary, but the easiest way to go is to use methanol straight out of the drum. Then it's always the same!

## SUPPLY & CHARACTERISTICS

Shell market Shell A Racing fuel in 20 litre drums which is actually 97% Methyl Alcohol and 3% Acetone. (The acetone makes starting easier). This varies in price all over the country. In SA Scotcher Petroleum sell methyl alcohol at 70cents a litre in bulk (bring your own drum). There may be other suppliers interstate doing the same thing.

The bad news is ... it's toxic, so don't syphon it by mouth, breath it in, or handle it carelessly. It will absorb moisture from the atmosphere so keep the lid on. It removes paint, and attacks rubber and light alloys which means we must replace it with petrol within a day or so of using the car. It's consumption can be as high as three times that of petrol, particularly if we are over-jetting to keep the engine temp down. And it burns without a clearly visible flame.

The good news is that we can run much higher compression ratios than on petrol. Up to 14 : 1 if the motor is strong enough. The greater fuel flow works in our favour because vaporizing all that methanol brings cylinder head and piston temperatures down dramatically. Methanol burns rather than exploding like petrol does, and in that sense is safer to handle. Also jetting is not so critical if on the rich side.

SO ... having said that, what troubles are we likely to encounter on the track using methanol? ... Well there's really only one! IT'S GETTING ENOUGH FUEL INTO THE ENGINE ON FULL THROTTLE!

That may seem like an over simplification. But it's not really. The truth is that the greatly increased methanol flow requirement over petrol (reckon on 3 times), is beyond the capacity of most standard fuel systems. They just won't pass the volume.

When that happens the engine goes like a rocket until it gets into third or top gear, the fuel level drops, it leans out, misfires, pops and bangs, and if you keep driving, siezes or expires with a hole in the piston crown!

Let's start at the fuel tank. Obviously this has to be big enough in volume to do the eight or ten laps or what ever is required. As a rough guide guess at a consumption of 10 racing miles to the gallon for a 500 single, a bit less for a 650 twin, and as low as 6 MPG for a big twin, especially around long tracks like Eastern Creek and the Island.

Then make sure the tank outlet has an absolute minimum of 3/8 inch internal diam. 1/2 inch is better. If a tap is fitted ditto. A tip on taps is to use the black plastic variety available for garden watering systems. They're cheap, big 1/2 bore, and not affected by methanol.

Use minimum 3/8 ID hose or bigger everywhere, and take particular care to see that the hose is not squashed under the seat, bent sharply. or flattened by an overtight tie!

If we exercise care and cleanliness ( gauzes in funnels etc) there should be no need to introduce a filter into the system because wherever we put a filter it will impede the flow of fuel. And because the hoses, unions and jets have to be so big there is less chance of a blockage. Now let's look at types of fuel supply.

## MECHANICAL FUEL PUMPS

This idea is okay, but keep in mind they were designed to pump petrol off a car camshaft rotating at half engine speed. Mounted on the back axle of our little rockets, their rotational speed and consequent pumping capacity is vastly reduced because in top gear the ratio is around 5:1 and in bottom as low as 15:1.

And when we're stopped NOTHING! So make sure the delicate valves inside the pump are sealing properly so it's fully efficient. Also mount the pump so the lever is almost fully stroked on the top of the cam. Depending on who made the cam, maybe it could use some more lift. Over the years the cam will have worn, reducing lift, so keep the rubbing surfaces lubed.

## ELECTRIC PUMPS

There are a number of different types of electric pump around but the only type capable of delivering fuel in volume without deterioration is the rotary type. All other valve types types like SU and Facet are marginal in their delivery rate and lose efficiency in time with the use of methanol. It is difficult to be specific here other than to stress that whatever the pump make certain its delivery rate is adequate. Check its output occasionally. It's volume we want rather than pressure.

## MINIMUM FUEL SUPPLY

The following sums might be helpful in establishing a minimum fuel supply to the main jet for, say, a 500 JAP on methanol.

- ☛ Average fuel consumption 10 mpg. On full throptle this will beto down to 5 mpg
- ☛ Estimated max speed. 100mph. To do 5 miles will take 3 minutes.
- ☛ Therefore fuel used will be one gallon in 3 mins. This equates to 1/3 gall in 1 min, or . 1.5 litres per minute.

Now ... no one runs 5 miles flat out! But remember always, it is peak demand we have to cater for, even when full throttle and max revs in any gear only last for a few seconds! If supply of fuel does not equal or exceed peak demand during that time, the motor will die of thirst! That is until you come off the throttle for a couple of seconds to let the bowl fill up again. If that happens look no further!

The problem is fuel starvation! Another plug or magneto won't help.

Remember that it's the fuel at the main, not just to the carby inlet that's important. If there's a drain plug in the bottom of the carb bowl, or if you can disconnect the bowl or bowls from the carb body, put a container under the car and turn the pump on for a minute.

Measure the volume of fuel passing through the bowl/s and if it's less than a litre for a 500 single start worrying. Removing the bowl for this test (even if the float stays in position) is inconclusive, because with some bowls in place the float may not fall as far, so nor will the needle.

Obviously this test is easier to carry out if you have an electric pump, a gravity tank, or the fuel tank is pressurised by hand or pump. However with a pump on the back axle you can still do something to ease your mind. A 15inch tyre size will rotate about 840 times in a mile.

At 100 MPH we cover 1.7 miles in a minute. Therefore the wheel will rotate 840 by 1.7 = 1424 times. Its a pretty sick mechanical pump that won't deliver 1.5 litres in that distance! But you can jack it up and make sure. That's half a litre in 470 revs of the back wheel

So far hopefully, we've got plenty of fuel at the carb. In the next issue we can look at the carburettor in detail in all its different forms, then finally get all technical with spark plugs, mixture strengths and air densities. So until we meet again to tighten our fillings. KEEP IT RICH!