

A SPECIAL FROM THE WEST

LOOSE FILLINGS

DON Hall has been part of West Australian motorsport – speedway and powerboat racing, as well as circuit racing – since the 1950s, both as a competitor and as a tuner. He was one of the recipients of the Commonwealth Government’s Sorts Medal 2000 Awards in recognition of his contribution.

Early in the 1950s he built his own air-cooled special, using a side-valve 750cc Harley Davidson engine. Side-valve 750cc engines were for a time considered an acceptable alternative to o.h.v. 500s in the US and also in Australia – an example was the s.v. BMW special started in Sydney by the Hooper brothers, completed by the Cuneen brothers and later raced in Historics by Hank Northey.

In Don Hall’s case this was all pretty academic, because a Harley was all he could afford, and WA racing in the ‘50s simply divided its classes at 1500cc in any

case. The Harley was ported and relieved, had its heads machined to lift compression, and ran a pair of Type 29 Amals and cams modified by hand. It ran reasonably well, Don recalls, but was not competitive.

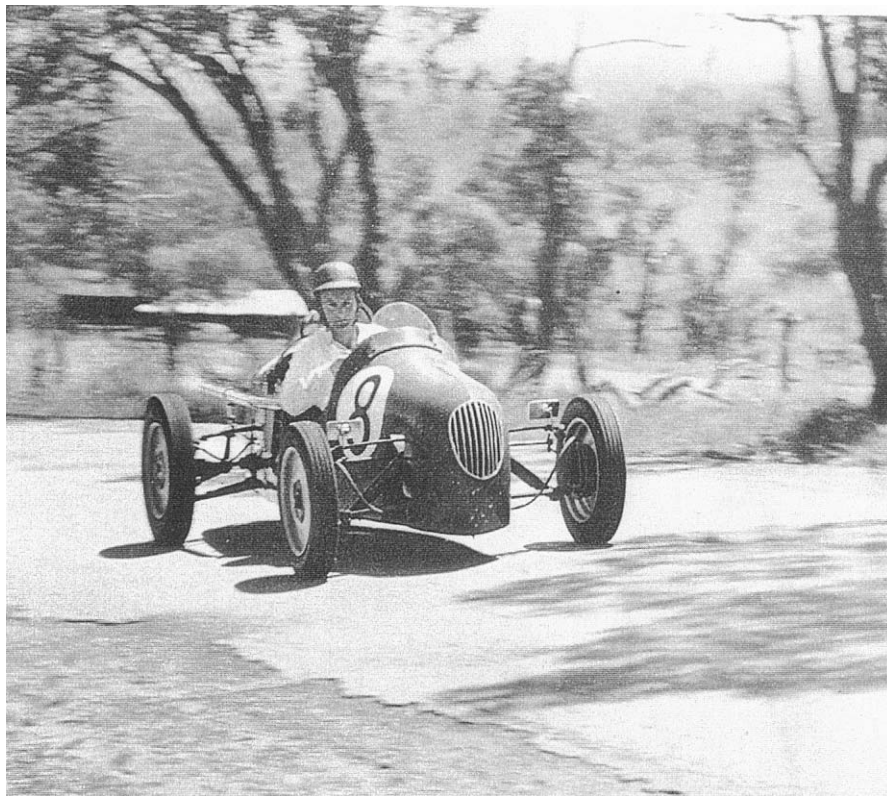
In the mid-‘50s Don bought a speedway JAP engine from a Perth rider going to England to race. The JAP was coupled to an ex-Square Four Ariel Burman gearbox and clutch, the clutch later modified and fitted with Ferodo inserts because what worked with a Square Four used to slip with a Speedway JAP. With nothing to lose, Don bored the JAP to around 600cc, casting his own piston and using, as best he can remember, Vincent rings.

The car didn’t have much more top speed and didn’t rev as hard, but its added torque was useful for hillclimbs. The total loss oiling system was “hopeless” on the mile-long straight at Caversham, WA’s

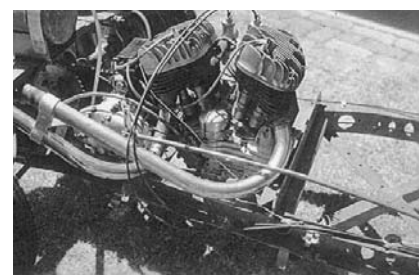
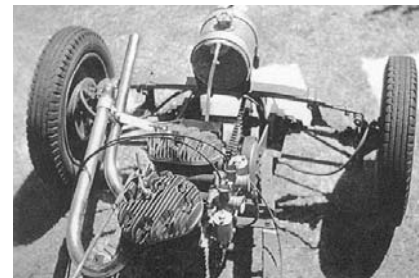
main circuit, and Don mainly ran it at hill-climbs and at those amazing West Australian around-the-houses race-meetings.

As the photographs below show, the car drew heavily on Fiat 500 chassis hardware. Other parts were fabricated or machined – Don had access to a well-equipped workshop and having served a seven-year engineering apprenticeship was fairly well versed in machining, welding, heat treatment, metallurgy and related subjects. Bodywork was mainly built by a local panelbeater, whose workmanship reflected his interest in the car.

By the end of 1957 Don was starting his own business, and the money required for rebuilding JAP motors was needed elsewhere. In Don’s own words, “I gave it away and started driving for other people.”



Don Hall’s special at Byford hillclimb on 14 December 1956 using a 500 JAP engine (above). Smaller photos (right) show the car with the earlier Harley-Davidson engine. Photos from Don Hall.



KERRY'S KWIZZER — THE ANSWERS

HISTORIAN Kerry Smith has updated his two quizzes with the answers so far received.

Kwiz #1

- Bodywork colour for Reg Smith's "Warm Rod" Cooper – red
- Rebodying of the Saywell Mk IV (now owned by Matt Segafredo) – first after Bill Reynolds' fire at Bathurst; then minor changes by Jack Myers when using the dual Triumphs, then by Bob Joass while restoring the car for Tony Caldersmith. Comprehensively answered by Tony.
- Cooper with the most Australian owners – Gary Simkin's Mk IV-Vincent, which has had 13 owners since John Snow, all of them listed by the present owner.
- Later history of the Alan Roberts Mk IV Cooper twin – became the Donland Special, see letter elsewhere in this issue from the present owner.
- History of the Stillwell Mk V – detailed Queensland ownership from John (Shortstraw) Holmes

Kwiz #2

- Did Brabham own/drive a Mk V Cooper – jury still out
- Most consistently raced/hillclimbed Oz

Cooper – possibly what is now the Cooper Minx; or Brian Reed's ex-Patterson Mk V; or Paul Armstrong's Climax-powered ex-Craig Mk V, now the Bill Pile special.

- Cooper with the fewest owners – Earl Davey-Milne's ex-Jones Mk IV JAP 1100
- Cooper with the most body colour changes – possibly John Bodinnar's ex-Nind Mk IV
- Cooper with highest number of different engines – Lloyd Hirst Mk V, going from 1100 JAP to Vincent to Ford 10 (Poteri) to BMC "B" (Joyce).
- Engines used in Oz Coopers, other than JAP/Norton/Vincent – Matchless*, BSA, Coventry Climax, Ford 10, Ford 105E, BMC "B", Hillman Minx, dual Triumph*, MG XPAG*, BMW*, Ariel Red Hunter (* supercharged)
- Who first fitted a Cooper with an oil cooler – Gordon Stewart for Crouch's Mk V 1100
- Which car was Jack Gates' green/yellow Cooper raced at Warwick Farm in mid-1961 – answers please!

FOR SALE

- Cooper Mk V Norton, ex Bob Gerard (UK), immaculate. Don Hall, 08 9386

2346.

- Cooper Mk V JAP 500, history in UK and Australia with Tom Hawkes and Bill Patterson, run with 500 and 997 JAPs, won 1954 Aust. Hillclimb C'ship, etc. CAMS logbook. Brian Reed, phone/fax 03 5439 5296.
- Ewing Norton ES2, built late '50s by Ron Ewing. Spare ES2 plus remains of 1300cc Harley Norton. Realistic price. Malcolm Thorn, 03 9807 1244.
- Cooper Norton – the Murray Rainey supercharged 750cc Manx-powered car, originally Mk 9 but factory-converted to wishbone front suspension. The ultimate air-cooled! John Caffin, 03 9744 1807
- IOTA magazines, 1947-1953, total 66 issues. Professionally produced journal of the UK 500cc movement from its early days. Very rare, \$1500. Graham Howard, 02 9440 4081

KICKING OUR HABIT

IN a recent letter to publisher Garry Simkin, Cooper JAP 1100 racer Fred Greneklee wrote, "There's something about these motorcycle aircooled cars that's addictive. I think it's best described as a love/hate relationship. There are times when you would gladly burn the rotten

60 YEARS of the 500 movement?

THE 500 cc movement has possibly just passed its 60th anniversary. UK monthly *Motor Sport* in its July 1941 issue – the month after Hitler had invaded Russia, and with the Germans literally on the other side of the Channel – published a reader's letter cheerfully forecasting not just what British motorsport would be like when the war was over, but forecasting quite specifically that there would be a new class for 500cc motorcycle-engined cars.

Subsequent issues of the magazine took the idea further, and it spread into the correspondence columns of weeklies *The Autocar* and *The Motor*. Even before the war had ended there were public discussion groups roughing out the details for a low-cost, "everyman's" racing category that would blossom in the egalitarian paradise which was to be post-WW2 Britain.

Remarkably, not one, but three, low-cost racing categories soon emerged – not only the 500s, but also an Austin 7-based 750 category, and a Ford 10-engined 1172 class. It was these categories – rather than the establishment Grand Prix or F2 classes – which launched the present-day UK motor-racing industry

Fortunately Chester McCaige (who owns the marvelous front-drive WGM 500) has a complete set of *Motor Sport* and was able to provide a copy of the July 1941 letter. Its author coyly signed himself "Tich," later established to be Joseph Lowrey, who went on to be sports editor of *The Motor*.

His argument was that for post-war basic transport there would be a further downsizing from the 1930s 750cc minimum

(eg the Austin 7) to engines around 500cc, and that new interest would therefore be shown in modified production 500cc engines for competition, in the way Austin and Morris/MG had developed racing 750s in the '30s.

"One form of competition motoring in which the 500cc class should become popular particularly rapidly is sprint work, the last stronghold of the amateur "special" builder," the letter said. "In a few years after the war the new power units of this size may be developed by various firms, comparable to the twin camshaft 744cc Austin engines, but for some time the single-cylinder motor-cycle type of engine should be able to give a very good account of itself. I am not a motor-cycle expert, but I have an idea that the modern 500cc engine can easily exceed 30 bhp on petrol/benzole, unblown ...[and] clutches and gearboxes...are readily come by."

After suggesting a "fairly sketchy" chassis would be enough for simple sprints, although club circuit racing would need "a fairly good chassis," he then concludes, "I cannot help thinking that a "special" of this size, given fair opposition in its own class...could give a very large amount of fun in proportion to its cost and, probably, if need be, defeat all but the most professional 750cc class machines.

"That, then, is my idea of one change that is likely in post-war motoring sport. I am not sure that it will be a change for the better, but I think it will come just the same..." Altogether these were remarkably far-sighted ideas, although Lowrey would have had no idea where his suggestions were ultimately to lead.

RON FROST *on technique*

the last instalment of his remarkable guide to air-cooled racing

NEVER, under any circumstances, let your engine back-fire when the car is being push-started. Always use an advance-retard mechanism and start car FULLY retarded. Advance immediately it is running. Never let your engine run in any position but FULL advance. Many an exhaust valve has been ruined in the pits by this method. Run your engine for at least five minutes at a steady 2,500 revs. Do NOT blip the engine up and down. Preferably jack-up the rear wheels and let them turn over in low gear whilst warming-up.

Have your pedals arranged so that you can 'heel & toe' the brake and throttle for fast corners. Always wear shoes that have no welt, (e.g. sandshoes). Always tuck trousers into socks. Smear pedal faces with Adfast or Bostick cement.

A layer of cotton-waste under the driving seat will prevent oil from the engine compartment finding its way into the office.

Always watch your rev-counter like a hawk. Never let your engine down by allowing it to exceed its maximum safe revolutions. Remember .Your needle is always 'slow' therefore if you want to peak at 6,000 r.p.m., lift .your foot at 5,750 on the clock. Ensure that ALL your gear-changes are above reproach, Do not use your engine as a brake. The foot brakes will pull you up from any speed with plenty to spare. In fact they can quite easily lock the wheels at 100 per. Therefore, spare your motor and use it only in the gears getting out of corners.

The maximum strain you can impose on your car, right from the spokes of the rear wheels through to the big-end and fly-wheel assembly, is accelerating from a standstill. Watch this point carefully and think about it.

When racing on a strange track, try and arrange to have a walk around it first, or better still, have a run round it in a normal motor car. You will be able better to appreciate the bends and learn their contours than you will from your low 500 car. Good 500 drivers do not so much see the bends as remember them.

During the race, be very circumspect with whom you "neck & neck". If you do not know the other driver, give him plenty of room. If you are the following driver, expect the worst at any moment and behave as if the responsibility for avoiding a crash is entirely yours. When making your inspection of the track, memorise the

places you can safely run off the road in case you have to take sudden avoiding action. Keep your eyes peeled for spilt oil or loose surface on bends and alter your line (even though it may be slightly slower line), rather than drive through it in company.

Because you can drive an ordinary type car well it does not necessarily follow that you will become a 500 ace overnight. In 1951 the famous drivers Reg Parnell and Bob Gerard stated 500 racing. At the end of that season they had only just reached the Senior class. High average speeds are obtained by exploiting cornering and braking potentiality of the car.

Remember too that every movement of the steering wheel causes one or other of the rear wheels to skid, immediately causing the car to brake slightly. This explains why, when a 500 spins, it stops dead from high speeds. It will be understood from this that every inch of the road must always be used in order that the steering wheel be used as little as possible.

If the danger in 500 racing lies in being punched in the side when taking fast curves at speed or sliding into something side-on whilst spinning. Both these occurrences will cause the car to roll over (most likely it will bounce off its wheels, over, and on to its wheels again) .This has often happened twice and three time in one manoeuvre.

The driver usually ends his days simply because, whilst this is all going on, he can neither get out of the car nor get down into it. Consequently he gets a sound bashing on the ground as the car turns. The antidote for .this is to have a solidly mounted roll-bar fixed to the car and for the driver to have parachute type quick-release harness strapping him to his seat. This has already proved very successful.

Ensure that the sides of the seat fit you very snugly. Remember what feels tight in the pits is not tight in the race. At high speed it is very disconcerting to have to struggle (among many other things) against a force that seems to want to pluck you right out of the car. Do not hand on to the car by the steering wheel. Use rather the sides of your legs against the chassis; this will let you feel the slightest reaction to the steering instantly. Don't omit to fit pads for your legs, incidentally.

Do not thrash your engine beyond what you know are safe limits merely to make up for your inexperience as a driver. Use your first meetings as opportunities to

learn the very specialised driving technique needed to pilot these cars swiftly. Make a definite aim of 1.FINISHING, 2.NOT SPINNING, 3.NOT MISSING ONE GEAR CHANGE, 4. NOT OVER REVVING AT ANY TIME. If you can accomplish this in your first race you are well on the way to being a successful 500 driver.

Top line drivers devote very much time and thought to the selection of the correct set of gear ratios for a particular track. The best equipped carry as many as 3 gearboxes with them to a meeting, each containing completely different sets of ratios. While this is probably too much for most pockets, gear changing in, for example, is a very simple task indeed. In any case, always aim at minimising the NUMBER of changes you have to make per lap.

In hillclimbs particularly, aim at running in one gear and never more than two. ALWAYS aim at doing the largest percentage of a lap (or hill) in top gear. Correct gearing may easily save more seconds per lap than many hours of so-called engine tuning. It is rarely that a so-called highly-tuned and specialist-prepared engine is the reason for a race being won.

And one final note:whilst the clutch is lifted, the car is coasting. So many things contribute to the success of the man who can gain that second per lap which represents perhaps a road distance of over 100 ft., and engine performance comes well down the list.

The driver's skill and judgment are first and foremost. These must be backed by first-class braking and roadholding. Wheel-bearings, gear-box and transmission must have friction loss of the very lowest order. (one famous tuner polishes the teeth of every gear in his gear-box) . One second per lap could mean 100 ft per lap which, in a 50 lap, race would mean a lead of nearly a mile - a very considerable lead indeed.



Published by Garry Simkin,
28 McClelland Street, Willoughby,
NSW 2068, (phone/fax 02 9958 3935)
Edited by Graham Howard,
1248 Pacific Hwy, Pymble, NSW 2075
(grimes@optushome.com.au)
Produced by Terry Wright
(tswright@ozemail.com.au)