

It's the 'soft sell' time of year again

DRAGSTRIP

by KEITH LEE

"FOR SALE" notices appear on many machines at this time of year, to make way for new bikes, and among those with signs up are the twin-cylinder Triumphs of Jeff Byne, John Clift, Mick Warne and Bob Webster and John Hobbs's mighty Olympus II.

Both Clift and Webster have prospective buyers but Byne has sold his bike less engine after a spectacular blow-up at the November Santa Pod meeting.

Mick Warne also suffered a monumental blow-up at the last meeting which completely blew out one half of the crankcases. It's fairly certain all four riders will be using

Elvington records

TRIUMPH development engineer Norman Hyde and works Norton rider Dave Rawlins have had seven records they set at the October Elvington records weekend confirmed by the ACU.

Rawlins rode the works 850 Norton Commando and Hyde rode "Slippery Sam," the 750 cc Triumph Trident.

NEW RECORDS

Quarter-mile: 1,000 cc standing start, Dave Rawlins, 12.65s. 750 cc flying start Norman Hyde.
One kilometre: 1,000 cc standing start, Rawlins, 23.625s. 750 cc flying start, Hyde, 136.27 mph. 1,000 cc flying start, Rawlins, 138.67 mph.
One mile: 750 cc flying start, Hyde, 133.87 mph. 1,000 cc flying start, Rawlins, 136.38 mph.

the extra strong Puma crankcases on their new bikes to withstand the stresses imposed by the nitro loads — which have now reached the 90 per cent mark.

A number of riders looked at the reasonably priced

Bewly two-speed gearbox seen at the Winternationals.

Mick Butler will be trying one of the altered Bewly boxes before the start of next season and the only disadvantage is that the gear lever has to be shifted before

it is actually needed — a sort of pre-select — taking a short while for the low gear to throw out of engagement.

But at around £85 it could be a budget-priced equivalent to the high-cost Christenson two-speed unit

Butler proves he's 'The Man'

THE END of the 1974 drag racing season culminated in the first "Winternationals" organised by the British Drag Racing and Hot Rod Association — and what a season it has been!

My prophecy that Mick Butler could be the man to beat as the season drew to a close proved right with Mick really turning it on at the Santa Pod Winternationals. He ran a best ever 9.23 seconds on his way to victory on a very slick track.



Bob Webster on his 750 Triumph which is now up for sale.

At the same meeting, Street Class rider Chris Russell had an encouraging performance. After selling "Reflection," his 750 cc blown Triumph, he turned up a little while ago with a 1,000 cc Honda prepared by his sponsors Hadleigh Custom.

Russell soon got into the mid-twelves on the road race trimmed machine but at the Winternationals he really surprised Terry Revill (Dresda Honda) by defeating him with an elapsed time of 11.64s. This was second only to Dave Rawlins' best of 11.47s on his works 850 Norton.

Sadly, Rawlins will not be seen often on the strips next season as he intends to expand his road racing activities.

This year was certainly a good one for Dave, though. He won both the Castrol

Drag Racing Championship and the National Drag Racing Club points championship.

With Rawlins gone it will be left to Terry Revill and

Chris Russell to fight it out at the head of the street class next year, and Russell is at present building up a new Honda motor to fit in his own frame.

Moves to exempt nitro from tax

A LOT of credit for the consistently low times recorded this season must go to the fuel used — the highly volatile nitro-methane mixture which substantially boosts the power output.

But nitro-methane is expensive, now around £7 a gallon after the latest price rise by the producers, Commercial Solvents. As if that was not bad enough the Government has included nitro-methane under the heading "petroleum substitutes" and slapped a 25 per cent VAT rating on it.

Peter Billington, who runs G-MAX Fuels, the sole importers of nitro-methane in Europe, is very concerned at the situation and has contacted the Customs and Excise to try and get nitro-methane exempted from the VAT rating.

The grounds for exclusion are:

1. Nitro-methane is not actually a fuel 53 per cent of its volume by weight is oxygen which is used to burn, in a more efficient manner, the methane mixed with the nitromethane.

2. It is a bi-product in the manufacture of nitro-propane from natural gas and because of its high cost and heavy consumption, it could never be used in a private motor car at which the new VAT rate is aimed.

3. Drag racing as a spectacle will be seriously affected if the top bikes and cars were to stop using the fuel due to the prohibitive cost.

Mr Billington's conclusions were that the only chance of removing the tax is for as many people as possible to write to their local MPs. So write to your MP now!

Dave Rawlins (850 Norton), the street class king, will be missing next year as he intends to do more road racing.



The engine is a 454, despite rumours that something bigger's been fitted. It's an alky-burner, built in line with recent American rule changes in this class. That means lower juice bills for Keith—but it's not gonna stay that way. As it is, the lump will stand a 25 per cent mix of nitro-methane, but on order from Earl Wade, who built the current engine, is another 454 that'll stand an 85/90 per cent cocktail. Which is just going to have to mean six second times. Until that arrives, the car'll be run on straight methanol though. The rest of the engine details you'll find in the panel opposite—let's move right along to the chassis.

Originally, the car was built with a 99in wheelbase, incorporating an engine position 25 per cent of the way along. That 25 per cent setback figure, by the way, is taken at the front plughole, and represents the position of the engine relative to the wheel centres. However, the American rules on setback also changed recently when the new Pro/Comp class was set up. In this class Funny Cars and Altered's run together, so it was decided that the Altered's should be allowed 30 per cent engine setback like the Funnies. So 30 per cent it had to be, and the wheelbase was lengthened to 116 in at the same time. That accounts for the gap behind the engine. Funnies and Altered's will be running together here too in 1975; so better give your earplugs a quick rinse before the season starts.

Apart from ripping off some of the previous sponsors' stickers and substituting some pertaining to his own sponsors and brand lines, Keith hasn't needed to do too much to the car. He has installed aluminium sheet on the sides of the car so that debris from a blown engine won't try to get under the tyres. For next season there'll be canard wings in front of the rear wheels, too. One other thing—at a Silverstone meet in 1974 the RAC Scrute expressed dissatisfaction at the position of the big top wing, reasoning that it would hinder Keith's egress in the event of some disaster happening down the strip. So it's been moved back a bit—the handling doesn't seem to have been affected much. The longer wheelbase makes it better anyway.

One thing we specially liked on the car was the three-speed B and J hydraulic transmission. We know these are pretty commonplace, but the idea of just pushing buttons to shift still appeals. Keith quite likes it too, but says it takes a bit of getting used to... 'Most embarrassing when you're doing 160 and can't find the right button for top gear!'

As we write, Keith is in negotiation with a major sponsor—if the deal doesn't come off he'll run the car in his own colours through '75, so there's no need to worry that we'll be missing seeing him. It's a drag that we can't tell you who the sponsor is right now, but it might blow the whole thing. Readers, you'll be almost the first to know. Promise.

So. The Americar pit crew is a pretty tight little operation run by Terry Sands, who also does sterling work rooting out hard-to-find bits for desperate Yankee riders who turn up at the Americar shop. In the first few runs the car put down late in '74, the crew was noticeable for its smart white uniforms featuring myriad stars in red and blue. A professional looking bunch.

We'll tell you that the best Keith has run so far is 8.7, but don't get the wrong idea. There's been a little gearbox bother to sort out, and an Altered is not the kind of car you let it all hang out in straight away in any case. There'll be testing done this winter, and next year we know somebody who'll be giving Dave Stone a run for his money at long last. AA

SPECIFICATION ENGINE

454ci (7.4 litre) Chevrolet, featuring Howard rods, Forged True pistons, Sig Erson camshaft, pushrods, rocker arms, guides and springs. TRW valves. Stock throw crankshaft by Delta Machine. Mallory magneto, Enderle fuel injection. Cragar inlet manifold, Doug Thorley headers. Bowers supercharger.

TRANSMISSION

B and J hydraulic three speed, push button operation. Crower/glide clutch. Plymouth rear axle, Henry's Machine driveshafts.

CHASSIS

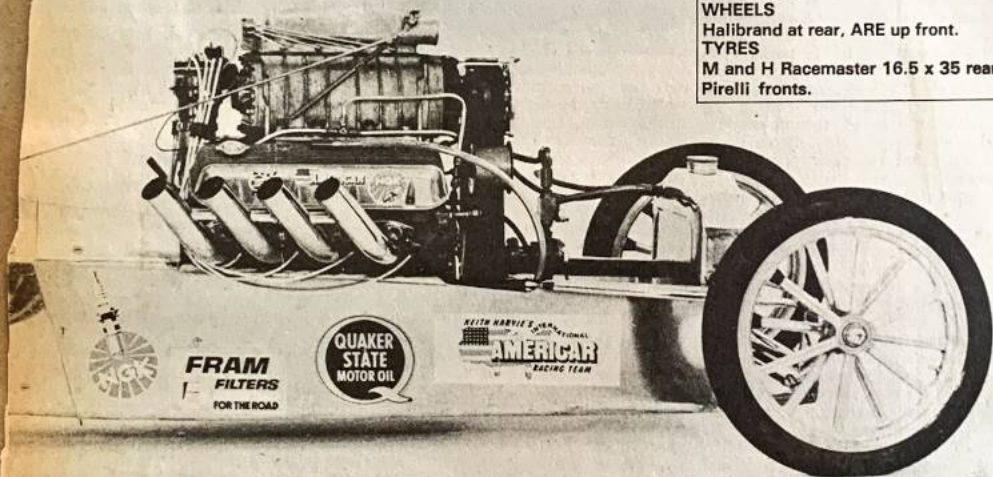
116in wheelbase tube chassis by M and S Race Cars. Torsion bar front suspension. Solid front and rear axle mountings.

WHEELS

Halibrand at rear, ARE up front.

TYRES

M and H Racemaster 16.5 x 35 rears. Pirelli fronts.





STRIP SNIPS

Don 'The Snake' Prudhomme is named as odds-on favourite to take the number one spot in Crager's new 5-second Funny Car Club—a follow-up to their 'club' for the first eight drivers to hit the fives in a Fueler. Prudhomme's Army-backed 'Cuda' is the winningest fender-flapper around right now.

Ronnie Sox is staying around the Pro-Stock ranks despite the ending of the Sox & Martin partnership. For the rest of this season Sox is down to wheel Ronnie Lyle's S&M-prepared Hemi-Colt in match races, while he has plans for his own car in '75.

Coinciding with the return of night racing at Santa Pod, the Drag Racing Club of South Africa held their first-ever night meet at Rainbow Dragway on the very same evening—2 November. The South African meeting was a grudge-race evening, with the government lifting their ban on petrol for racing to enable street machines to enter.

Guess you know Big Daddy Don Garlits took Top Fuel at the Supernats/World Finals with a five. Joe Smith went with a whoopin' 8.2 to score in Motorcycle Eliminator.

Seen the noo Revell Don Garlits kit? You get a 1/25th replica of the back-motored rail, plus

a weeny driver figure of the old man hisself—all for £2.10 including postage from American Automotive, at 77 Manor Road, Wallington, Surrey. The 'Miss Revell' Roz Prior kit should be around in the spring we're told.

Latest line for street and strip racers with appearance in mind—clear small-block Chevy rocker covers by Mr Gasket. Should be available over here soon.

Nearly 50 new NHRA National Records were set at the Indy Nationals early in September, including a new Funny Car low ET mark of 6.19 by Billy Meyer in the Mustang II machine. Motor is a 426 hemi punched out to 484 cubes. AA/Altered record now stands at 7.01/200.44mph and is down to Dale Armstrong. Ken Veney, who built Armstrong's mill, also set a new BB/Funny Car mark of 6.99/203.61mph.

Revell, already the biggest sponsor in American drag racing, will be increasing its involvement this side of the pond for '75.

Rules issued by Santa Pod Raceway for a Budget Class of racing scheduled to start next season lay down a maximum cost outlay of £300 and a requirement for the car to be V8-powered. While the intention is to get fresh faces in the dragster ranks the Budget machines do not have to feature tube chassis. 1954 here we come!

SOUTH AFRICAN FUNNY GETS WRITTEN OFF

One of South Africa's few Funny Cars, a blown and injected hemi-powered Studebaker, came to its end in a dramatic way on 29 September at Rainbow Dragway in the Transvaal, though luckily owner/driver Per Pedersen-Hoien was unhurt apart from a scratched hand.

As Per went through the traps the throttle jammed and the machine went out of control, narrowly missing a gaggle of cars waiting at the end of the strip to return to the pits. The car came to rest entangled in safety fencing at the end of the shutdown area.

Mike Lintern

AUSSIES PRODUCE A 3000 BHP MOTOR!

An all-Australian back-mounted Top Fueler, packing a radically new Aussie V8 mill developed to produce a staggering 3000bhp, has entered for the NHRA Winternationals big one in the States on 1 and 2 February. The car itself is said to be fairly conventional but the mill is a trick all-alloy unit designed and produced in Sydney by engineer Phil McGee. Weighing in at a giant 511 cubic inches, the motor is similar in concept to Offenhauser four-cylinder engines—it has no cylinder heads as such.

The McGee mill comes with four overhead cams, and four valves per cylinder. McGee completed three years' work on the design and construction in August, and was scheduled to debut the total package at the Australian Nationals in November.

Mike Lintern

WELSH NOOZ

The South Wales Drag Racing Association seems to be going great guns. DLT is now a fully-unpaid Honorary Life Member and can be seen giving Vice-Chairman Tom Clarkson a plug, together with an almost equally hairy Chairman, Geoff Lunn.

Membership costs £2 a year and entitles you to discounts from traders in the area as well as participation in coach trips to meetings and the gay social whirl. There are fort-

nightly gatherings at the Elizabethan Hotel, Penarth Road, Penarth, and plenty film shows too. You've just missed one on 3 December, next is 28 Jan.

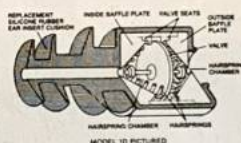
Member Ron Hughes is building a drag bike at present, and the hope is that Wales will have a quarter-mile World Speed Record to boast of before too long. With all that enthusiasm bubbling around him it's quite possible too.

More info from Geoff Lunn at 38 Minfrwd Road, Pencoed, Bridgend, CF35 6SD. GH

EAR EAR

While mingling with the crowd at the Pod the other week, head vibrating merrily, I took to pondering how quite so many people could stand so close to those open exhausts without either ear defenders or other apparent means of protection from the roar. Perhaps some think that's what they paid their money for, but I expect quite a few were wearing Sonic Ear Valvs. (sic)

These are inconspicuous little



gadgets worn like ear plugs, and contain a sensitive diaphragm valve which blocks excessive pressure waves, which might otherwise cause pain or injury to the eardrum. The good thing is that you can still hear normal conversation, unlike when wearing earmuff type protectors. Pixman Phillips bought a pair when he was across the pond last year and says they really work.

You can buy them here from E G Broadbent, 13 Woodroyd Avenue, Honley, Huddersfield, at £2.50 a set. GH



FAREWELL FROM ED SHAVER

Thanks very much for making it possible for me to use some space in your fine magazine to bid farewell to my friends.

I have decided to return to America this winter to live. I shall miss the English people terribly; the people who have made it possible for me to race these past four years and all the wonderful people I've had the opportunity to meet.

There are far too many to name but special thanks to Mick Webb, Mark Stratton and the gang at Hustler Racing, Clive Skilton, Alan Wigmore, Frank Johns of Castrol publicity, Mike Key, my favourite racer Dennis Priddle, the almost unbeatable Stones, and all the cruisers.

Last, but by no means least, you crazy lot at Custom Car; Andy, Mike Hill, Roger 'Groucho you all' Fennings, and Roger Phillips. Many thanks to you for allowing my various cars to appear on your pages so often.

The people that most any racer misses greatest in departing are the guys who pay the bills—you who have paid your money to see drag racing. I thank you for your kind and undying support. Without you there would be no drag racing and I would have been just another 'Bloody Yank GI' these past four years.

Thank you all from the bottom of my heart.

Ed 'The Layer Cake' Shaver





Straight up WITH JIM REYNOLDS

Trusty Triumph



JUST A BRIEF word for the good old British Triumph twin engine. Tony Weeden (above) has been wringing some incredible times and speeds out of his 500 American-sponsored Triumph this year, with terminals as high as 155 mph at the end of the quarter.

This is done on a 1958 Tiger 100 motor, complete with original three-piece crank. That's the crank that some know-alls say is no good and should never be used in a tweaked motor. Fortunately, Tony doesn't listen to that kind of talk.

He revs the little twin up to 10,000 rpm in the gears, using up to 80% nitro-methane in fuel and it just keeps on going.

Before taking the trusty old twin to the Elvington World Records meeting, Tony had a look over the engine and found that the crank had been flexing so much at peak revs that it had scored the sides of the crankcases. The lad was a bit put out that he had to fit a new set of main bearings, but a new world record was some consolation, I suppose.

Multi-engined stroker?

HOT RUMOUR from America is that Boris Murray, that great Triumph exponent, is co-operating with two-stroke specialists Denco Performance in the development of a multi-engined stroker.

Denco build some indecently quick Kawasakis and their involvement with Boris could be one of the most significant developments in America since they started putting two engines in one frame over there.

Will it mean the end of the nitro-gulping big Harleys and double Nortons and Triumphs if the Murray/Denco tie-up works? I doubt it very much, for there is a lot of ground to make up on the four-stroke brigade. And I hope drag racing is never taken over by a horde of screaming Nippon pollution pumps — I like the bikes we have now.

Priddle's 1975 drag plans

Dennis Priddle will have a new chassis for the Avenger, work having already started on the project, and the Funny car will become the prime vehicle for the team. The car has been a big hit everywhere this year, particularly with its tremendous performances against the two Santa Pod cars, which have considerably more powerful engines.

Despite this, the STP car has been down to 7.1 s as mentioned, and would certainly have managed a six had the finance been available to run that bit harder. Next year Dennis will use the Donovan engine that has powered the Revell dragster for nearly two years, which apart from being lighter than the iron motor has been rumoured to be even bigger than the stated 417 cubic inches, and motors that power Hayward and Hertridge.

The rail will continue in its present form with the iron motor—which, as Dennis points out, has run a very respectable 6.59 s two years ago—a time so far only beaten by himself and Clive Skilton once each. So despite the new threat of Crane and Hutchinson in the two rear-engined Pink powered cars, Dennis's talents as both builder and driver should keep him in contention in Top Fuel as well—although it is unlikely that both cars will appear together except for one or two major meets.

Recent rumours about Priddle driving one or more Chevrolet powered cars entered by another major team, would appear to have little substance at present, although the idea was apparently discussed at one stage.

The Fast Lady, Roz Prior stands by the Fast Lady (dragster), confirming that once again Revell will sponsor their Fast Lady for next year's drag season.



Hall goes Pro Comp with Priddle chassis

One entrant in the Pro Comp class will almost certainly be Mike Hall, who in his second year in the sport has been running the ex-Freddie Whittle "Shutdown" Fuel Altered. His blown 392 powered Bantam replica has not been the best handling car, but towards the end of the year it got back into the m.d eight's, and was invariably over the 180 mph mark.

Now Mike has Dennis Priddle's STP Funny car chassis lined up, a far more modern design more suited to current demands than perhaps the old design was. As the chassis has been down to 7.1 s at 198 mph in Funny Car guise, it should be ideal for the reliable 392 running on Methanol. Mike will probably keep the unique Bantam body which was hand-formed by Whittle in aluminium from drawings and pictures of the original pre-war cars.

1975
INTERNATIONAL
CUSTOM CAR
SHOWS
5th Anniversary Year

4 TOP SWEDISH ENTRIES!

RODS!

STOX!

CHOPPERS!

RAILS!

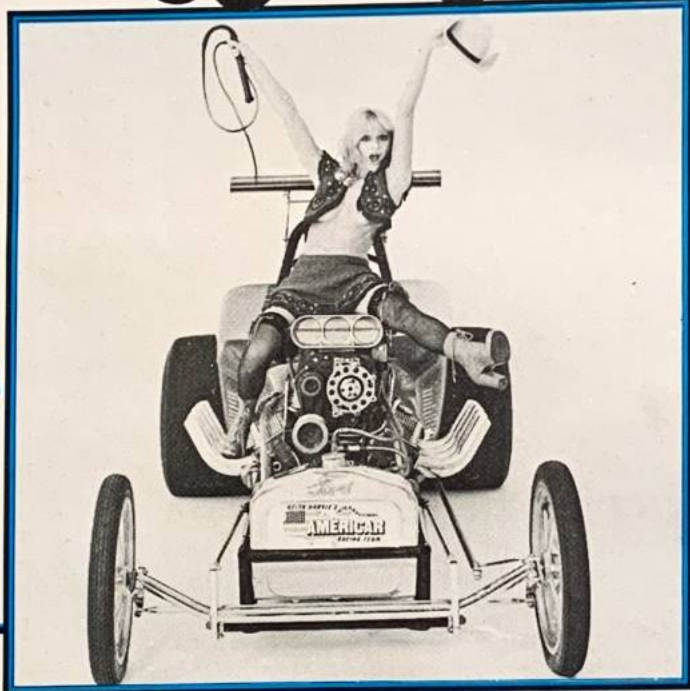
FIRST-TIME DRAGBOAT!

FILMS!

SOUNDS!

GOODIES!

PRIZES!



BRISTOL
VICTORIA ROOMS JAN 3-4-5
CRYSTAL PALACE
JAN 18-19
MANCHESTER
BELLE VUE JAN 31-FEB 1-2



The Jaguar-engined Minivan, known as the Stripteaser, has achieved an 11.1 s at 122 mph this year.

Stripteaser undressed

One of the most consistently popular cars in British drag racing for the past few seasons has been the Jaguar powered Minivan, "Stripteaser." First appearing some five years ago with a conventional ladder construction tube frame and 'van shell, the car raced until the end of 1972 in much the same form, the main changes being to the engine, which steadily grew more powerful as time went by.

At that time it was one of the fastest in its class in the Competition Altered field, but the team, consisting of Roger Bishop and Bob Messent with Jim Brett as assistant, felt that they knew where the weaknesses were in the design, and set about constructing a new car for '73. This was narrower and lighter than the previous design, and enabled them to get the big slicks they wanted to use under the body, instead of sticking out each side as the racing tyres had. The main rails are 1½in 16swg T45 supplied by Accles and Pollock, with a wheelbase of 85in and the maximum allowed 25 per cent set back for the engine. The straight tube front axle is suspended by motorcycle coil shocks with radius arms.

The Jaguar gearbox had been a reliable unit, but like so many others, they had found it slow to use, and in the instant world of drag racing, there is little time to make up for lost moments in shifting, so they decided to switch to a Muncie four speed from a Corvette. This had an aluminium casing and thus saved some useful weight, but as luck would have it, the second-hand box had already seen too many power shifts in previous drag cars, and was not as successful as had been hoped. A narrowed Jaguar back axle had Wolfrace wheels fitted with 8½ x 15 Kelly Springfield slicks, not one of the more up-to-date tyres, but cheaper than the better-known makes and a vast improvement over racing tyres with the longer 'footprint,' essential to dragging. The body was further lightened by removing as much of the inner metal work as possible, and retained the glass front that had been grafted on when the car was first conceived. In this form the car gathered its reputation for wheelies, and won nearly every time out, losing only when the gearbox let them down, with a best of 11.4 s reaching 119 mph.

For the past season the first priority was the gearbox, and they finally came to the conclusion that in an altered type car with a central driving position, there was no way that a four speed manual transmission can be shifted as fast as is either possible (in a conventional car) or necessary to win. Either the abbreviated lever is biased the wrong way, or it sticks up between the knees, whereas for power shifting, a conventional driving position is needed.

So, impressed by the Clutchflite transmission used by one or two other teams in 1973, they decided on that. But whereas other users of the transmission were running expensive V8s of one type or another, no one else in the lower classes had ever considered

spending as much or more money on the gearbox as they had on the entire car, but such was their determination to win that they thought it worthwhile.

Made by B&M in America, it consists of one of the big three automatics, in this case the Chrysler Torqueflite, with the bellhousing machined off and replaced with an alloy plate, the input shaft projecting with a splined drive for the clutch to fit in place of the torque converter. The transmission is bolted to a regular hydro-formed safety bellhousing and bolted to an adaptor plate on the Jag engine, which is beyond the usual range of engines for this type of transmission. The gearbox itself has over a hundred detail improvements including full manual control, so that once off the line, which can be accomplished with as many revs as needed as with a conventional transmission, changing is achieved instantaneously with no effort apart from flicking the shift lever with one finger. The clutch used in this case is a Borg and Beck unit that the team helped to develop, with a Chrysler spline centre riveted in place of the Jag one—the rivets of the two units lining up exactly as it happened!

With the unit's reputation for hard shifts, they also elected to instal an American back axle, choosing an Oldsmobile of late Fifties vintage, renowned for its strength and *de rigeur* in all drag racing vehicles until the past few years in America when power outputs have got so high that the later Dana and Ford units have come into use. A wide range of ratios is also available for the unit, and

they chose 4.56:1, whilst to get it in the confined dimensions of the car, Alan Herridge narrowed the case and half-shafts and fitted Jaguar disc brakes.

The engine remains much the same as last year, and consists of a 3.8 litre block of unknown vintage from a breakers yard, stripped and carefully reassembled and balanced. The head is a straight port with some cleaning-up done, and D type cams are used. The ignition is stock, whilst carburation is handled by three 2 inch SUs modified to run on straight methanol, though nitro has been known to pass through them in small amounts.

In this form the car has gone down to an 11.1s at 122 mph this year, not a vast improvement you might think, but in drag racing, as in other forms of racing, each additional tenth of a second gets harder, and their win/loss ratio speaks well of the car. It still pulls the front wheels way off the ground on every run, but has achieved remarkable consistency nonetheless, and on one run when they took the body off to see how it would perform with less weight, it clocked an impressive 10.7s at 124 mph. With an all-up weight of 1560 lbs at present, it is not as light as many would believe, and one of the team's aims over the winter is to get another 100 lbs off the car to get down to the minimum allowed in the class. Another is to look into fuel injection as a means of tapping some more power from the engine which has so far remained remarkably stock, whilst longer-term plans could include a small block Chevy if the Jag finally runs out of power, but for the meantime they plan to stick with it, showing just what can be done by mixing traditional British equipment with specialised American Drag racing hardware.

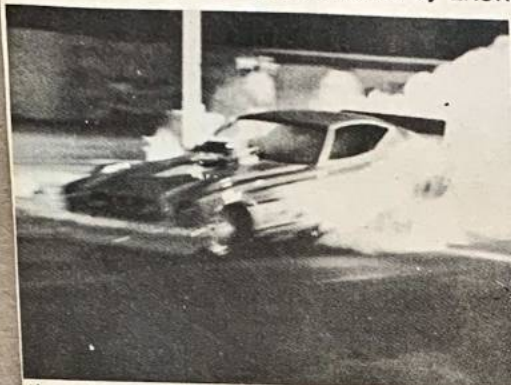
Stripteaser still pulls the front wheels off the ground on every run.



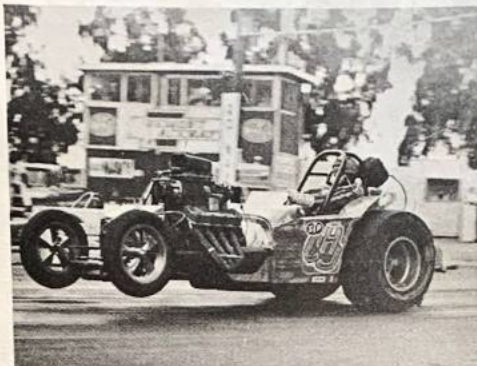
DRAG

The American Grand Nationals

The drag racing feast photographed by LAURIE GATEHOUSE



Above, 19-year-old Billy Meyer in a '74 Mustang goes night racing. Below, Double Chevrolet power for Joe Ortega's AA/D didn't help him to qualify.



Hurry Bondakan drives his A/A '23T, lifting the wheels to 7.3 s/188.67 mph. Below, the end of Shirl Greer's funny car.



Last year's winning funny car, Jim Green's Green Elephant driven by Mike Miller, qualified first with a 6.23 s/222.22 mph, but was defeated by Ed "the Ace" McCullough.



AUTOSPORT, DECEMBER 26, 1974

More on the nitro situation and costs

Following on the recent news about the increased cost of nitro comes clarification of the reasons from G-Max Research, sole supplier of the fuel in this country. At present it costs £6.96 to racers in pure form per gallon, rising to £8.15 with the recent VAT increase on petrol or petrol substitutes, a price that is likely to be even higher when the basic material goes up next year.

Nitromethane is not an oil-based product and is only made by one company in the entire world, namely Commercial Solvents in America, and as well as being used in drag racing and other motor sports it has various industrial uses, so to classify it as a petrol substitute is clearly erroneous.

G-Max state that in their opinion (and as the sole supplier they probably know more

about it than anyone else in the country) Nitromethane is a safe carrier of oxygen to ignite the methanol that is always added in some percentage, and therefore to use it in a normal car engine is just not feasible, either technically or financially—who would substitute petrol at 65p a gallon for nitro at over £8?

This great increase in tax will do nothing to help drag racing, which like any other branch of the sport is already expensive enough at Top Fuel and Funny Car level, for if these cars are priced out of existence, then all will suffer, and G-Max urge all racers and followers of the sport to follow their lead by contacting their MP with a view to granting an exemption to Nitromethane in respect of VAT.

I'VE RUN 9.16s at Santa Pod on the 1,500 cc version of Olympus II, my Shorrock-blown double-engine Triumph dragster," said John Hobbs. "So I intend to rely as much as possible on my past experience — and Weslake's — to bust the 9s barrier for the British standing-quarter on my new 1,700 cc machine.

"If I succeed in shaving that crucial fifth of a second off my time, to get into the eights, then I'll be happy to experiment more widely."

A 27-year-old chartered engineer with Eastern Gas, Hobbs is being sponsored by "Motor Cycle," Weslake and Dimension Four (the go-ahead new research and development company in Northampton). His down-to-earth approach, avoiding untried ideas as much as possible, is aimed at quick results. For, though he is the nearest, he's not the only British sprinter within spitting distance of the eights.

Realistic

Were it not for bad weather at Evington on his last two record bids, Hobbs might have already beaten 9s. He reckons that was a realistic target for his 1,500 cc power plant — especially had it had more sophisticated transmission. (It finished up with a Norton box containing only third and top gears, and a sintered-iron slipper clutch that took 12 months to get right.)

Take Weslake's wealth of knowledge on gas flow, and blend it with John Hobbs' vast experience of supercharging with nitro. That could be the recipe for the first British eight-second standing-quarter.

But the soundness of his approach, including his insistence on blowing each engine separately, is obvious from the fact that his world 500 cc standing-kilo and 26.385s for the standing mile, on the original version of Olympus II, are absolute world records, though the engine size was then only 1,000 cc.

"Considering it was never designed for such brutal use," says Hobbs, the Triumph must be the most fantastic production engine ever. Indeed, my original plan for 1975 was

to continue with the double Triumph power plant, but to fit longer-stroke Norton or special crankshafts to push the total capacity up to 1,650-1,680 cc.

"But the engines are overrated already and I should have had to fit Weslake or American connecting rods. Then I read your analysis of Bill Currie's eight-valve Weslake twin (Motor Cycle, 18 May 1974) and decided that was a much better bet.

"Anyway, the first Weslake twin was virtually a duplicate of the Triumph Bonneville crankcase assembly to suit the much higher revs

and power provided by the Rickman-Weslake 687 cc eight-valve cylinder and head conversion. So my eight-year-old Triumph experience should be useful.

"New Weslake have kindly agreed to provide two 850 cc road-racing engines and are keen to co-operate in any necessary development for the much different requirements of sprinting."

What specific advantages does John expect from the Weslake engines, as compared with the Triumph? "Greater mechanical safety and more power," he said. "The Weslake engine is much more robust. The crankcase is thicker in section and surrounded by deep stiffening webs right up to the neck. Another obvious advantage is the one-piece construction of the crankshaft, in which the mainshafts are larger in diameter — they were a weak point in the Triumph.

Then, the Triumph arrangement of bolting the cylinder block to the crankcase and the head to the block was not strong enough for supercharging and nitro, so I had to strap the head right down to the main bearings. The Weslake assembly is far more solid, with four long bolts clamping both head and block to the crankcase, four cylinder-base studs, four Allen screws clamping the block to the head, and two long studs in the middle tying the head to the base flange.

The use of double valves must improve both power and mechanical safety, I suggested.

"Yes," agreed Hobbs, "the deeper breathing of double valves had already been proved with atmospheric induction, and they must be equally beneficial with supercharging. Also, the higher revs at which the lighter valves can be kept under control must mean more potential power without overstraining the engine.

"With the 750 cc Triumphs, maximum safe revs were 7,500 rpm, though I ran them briefly to 8,200. You can add about 1,000 rpm to those figures for the 850 cc Weslake. That means I can pull lower overall gearing for better acceleration and still get a higher top speed."

Three basic types of



John Hobbs tells VIC 'WHY I'M THE MOST FAINTASTIC ENGINE EVER'

John Hobbs tells VIC WILLLOUGHBY 'FORSAKING FAINTASTIC EVER'

They are the Shorrock eccentric-valve compressor, which is unrivalled for bottom-end punch; the Roots-type blower with its meshing lobes, which gives very fast, when whirling charger, which is also re- happy, but driven by the exhaust gases, not mechanically, hence absorbing less power.

I asked John which type he would fit, or had he thought of using a Shorrock for one engine and a turbocharger for the other? "Turbocharging is out for several reasons," said John. "First of all, with separate blowers are necessary and the plumbing would be an absolute nightmare."

"Why can't one blower serve both engines?" "Because of the inertia of the liquid content of the charge during hard acceleration," John explained. "Whereas air/petrol mixtures are around 15 to 1 by weight, nitro mixtures can easily be 4 to 1. Once the bike rockets off the mark, the fuel droplets mostly go to the rear engine, making it run overrich, while the front engine runs so weak that the pistons fall."

Besides horrid plumbing, what else has John against turbocharging? "I asked John which type he would fit, or had he thought of using a Shorrock for one engine and a turbocharger for the other? "Turbocharging is out for several reasons," said John. "First of all, with separate blowers are necessary and the plumbing would be an absolute nightmare."

"Its power boost comes too late," he says. "I need the benefit at lower revs for getting off the mark. What's more, though turbochargers work well with petrol, methanol or diesel, I wonder whether the turbine would withstand the much higher exhaust temperatures reached on nitro."

To enable the exhaust valves to survive with this power-multiplying fuel, I have found it necessary not only to use very rich mixtures, but also to extend the valve overlap, so as to swamp the valve heads with fresh fuel. This excess fuel continues to burn well down the exhaust pipe and I might overheat the turbine blades.

"Roots-type blowers also have the wrong boost characteristics for getting out of the hole. They need to be denser faster than centrifugal compressors, so absorbing more power. And they are more awkward to install."

On both sizes of Olympus II, Hobbs used 750 cc Shorrock compressors with the Weslake engines will be going up to the 1,500 cc size (142B). And since their safe limit is 7,500 rpm, they will be driven at about seven-eighths engine speed, which should give a boost pressure of 15 to 21 psi — more than he's had

before. As on the 1,500 cc Olympus II, each blower will breathe through a 2in SU carburettor. A longer-term project — to bypass inertia effects and get more precise mixture control — is fuel injection for each cylinder separately.

Notwithstanding, Bill Currie's success in winning the Motor Cycle sidecar championship, John Hobbs' engines will be to a different specification. Instead of the 180-degree crankshaft that Currie uses for its smoother running (and lower pumping losses in the crankcase), Hobbs gives the 360-degree shaft. This gives the even breathing intervals necessary

when each blower is serving to cylinders. The uneven intervals with 180-degree crankpin spacing would call for a separate blower for each cylinder (a hopeless installation prospect) — or both blowers feeding a common plenum chamber, from which all four cylinders would breathe evenly. But that brings us back to the problem of unequal mixture strength front and rear.

"I want iron cylinder blocks, too," says Hobbs, "for their extra strength and resistance to distortion under the extreme stresses generated by the combination of supercharging and nitromethane. Even so, for reliability he plans to use as small a proportion as necessary to reach his target — starting at about 25 per cent and maybe going up to 50."

Another departure from standard will be valve timing, where the requirements for supercharging are at variance with those for atmospheric induction (for the same fuel) — and (for the same fuel) — and those for nitro are different again.

When methanol was just about the only alternative to petrol, it was common experience, Weslake's included, that blown engines required less valve overlap than unblown ones. That way the boost pressure was highest and the loss of fresh charge to the exhaust was least.

But, with nitro Hobbs wants more overlap, not less, from the sheer necessity of cooling the exhaust valves with fresh fuel. Even though double valves run cooler than single ones.

"I propose to grind Weslake cam blanks to extend the inlet period from 320 to 350 degrees, and to advance the exhaust timing by 10 to 15 degrees. As with the Triumph engines, the use of separate inlet and exhaust camshafts will enable me to alter the timings individually."

Hobbs is keeping his mind open about ignition. Standard equipment is a Lucas RITA transistorized unit, powered by 12-volt

battery. Again nitromethane complicates the issue, and John wonders whether amps might not prove more crucial than volts in setting the charge light.

RITA will be given her chance. But if her performance doesn't come up to scratch, John is prepared to revert to the Lucas SK2 racing magnetos that have served him so well on Olympus II. Mounted on the timing cases, they would be vulnerable and increase engine width considerably — so a rear mounting and toothed-belt drive could be on the cards.

Similarly with plugs the standard 10mm size has sometimes been found prone to foul. But again John will "suck it and see." This is one of the reasons he plans to build an overriding manual control into the Crowcliff centrifugal slipper clutch that is on the way from the States. Without manual control, he would be unable to blip the throttle on the start line, to clear a sully plug, without engaging the clutch and taking off.

But transmission is another story, and no less intriguing. I'll discuss it in a further article. Reverting to engine modifications, each piston will have a low-friction P.T.F.E. (polytetrafluorethylene) buttons plenty of courage and a let into the front of the skirt and another three at the rear — two just below

the rings and one at the bottom. By holding the skirts fractionally clear of the cylinder bores, the buttons reduce piston friction (a sizeable proportion of an engine's mechanical losses) and lessen the risk of seizure. What if they wear rapidly? There are no prizes for longevity in drag racing.

As an Olympus II, the engines will be coupled by three spur gears from an Ariel Square Four, running in a cast-aluminium case. Spacing of the crankshaft centres is 10in, and the sizer ensures that (contrary to Square Four practice) both shafts rotate in the same direction.

How much power can Hobbs expect from this blown, 16-valve, double-engine nitro-puzzler? Well, Weslake have got 173 bhp/litre out of a turbocharged engine running on petrol. So 200 bhp/litre seems quite realistic for John's set-up, even on a moderate nitro load.

That translates into 350 bhp as a base from which to start developing. Making full use of that sort of poke from a standstill is no less a problem than producing it. And the solution involves highly sophisticated transmission. Sin of very special rubber on the ground, a 22in-wheelbase Dimension Four frame to John's layout, plenty of courage and a let into the front of the skirt and another three at the rear — two just below

All of which, more anon.

Cylinder head of the Weslake engine. Note the double valves, central plugs and 10 bolt holes.



Above: John Hobbs in action at Santa Pod on 'Olympus II', his double Triumph engined drag bike which has done a best of 9.16 seconds on the quarter-mile.

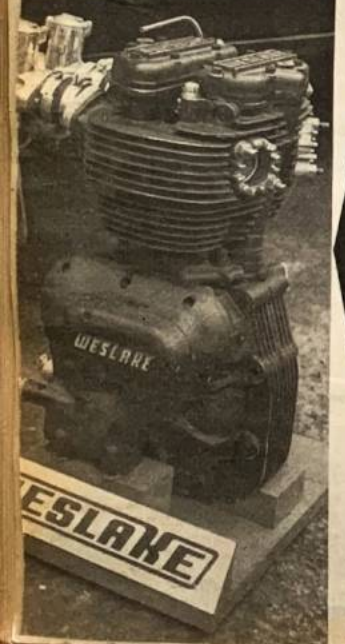


On the test-bed the 850 cc road-racing engine gives 88 bhp. Hobbs' engines should double that output.

HOBBS' CHOICE

Stay with technical editor Vic Willoughby for further reports on this 'Motor Cycle' sponsored bid for a British eight-second standing-quarter-mile.

Left: The Weslake eight-valve twin that John Hobbs has chosen for his new drag bike. Two of these — supercharged — should give upward of 350 bhp.



Cylinder head of the Weslake engine. Note the double valves, central plugs and 10 bolt holes.

1974 season off track review

DRAG

After the gloomy predictions at the beginning of 1974, most motor sports enjoyed a good year, and generally speaking Drag Racing could be included in this category, but whereas economic factors did little real harm, the weather stepped in to take its place with a higher proportion of rained-out or spoiled events than ever before—of the eight NDRC even's only three had weather that could be described as reasonable throughout the duration of the meeting, so that from the promoters point of view it was not a good year.

Santa Pod was also hit by bad weather on many occasions, but with more meetings overall, they presumably fared better.

But to the racing, and without doubt 1974 was the year of the funny cars. 1973 saw a new dimension to the sport in the UK with the arrival of the two American cars, but with the addition of Dennis Priddle's STP Avenger and Ed Shaver's Vauxhall, and later the Scimitar of Roland Pratt, the crowds got some really first class action. Only Priddle's car was capable of providing a serious challenge to the two bigger American cars, which both had giant 480 cubic inch plus, late model hemis, the one in the Allan Herridge driven "Stardust" propelling the car to a 6.8 s run and 210 mph terminal speed. Owen Hayward improved steadily throughout the year to get his Houndog 7 down to seven flat at 202 mph, and if he never sits in the car again, he will always be remembered for surviving the biggest wheelstand of all time at Santa Pod when he stood the car on its rear when racing Dennis Priddle. The clutch had given out on the run before and the team

had replaced it hurriedly with one from their dragster, and being set up for the longer wheelbase car, the excessive low-end bite just lifted the car up and up.

Priddle's smaller car, though somewhat lighter, had an iron 392 fitted, but even so he got down to 7.11 s at 198 mph and could certainly have dipped into the sixes with more finance.

At the last meeting he had the lighter and stronger Donovan fitted, which may be a pointer to this year and an all-out attempt to win on horsepower and not reaction time. Ed Shaver's performance in the Castrol backed Vauxhall suffered all year from erratic handling, and even a new chassis for the rear engine device did little to improve the situation after Clive Skilton had rolled the first car while testing it. But it did eventually get down to low 8 s, beating Dave Stone's altered at Snetterton when he was hampered by the dip in the track. Roland Pratt in the Revel Scimitar made only a couple of appearances, but the nicely turned out car looked very good, and should turn in some good times in the new Pro Comp class if the team elect to run in it. The Swedish visitors to Silverstone also included two funny cars, with Leif Dabach's Volvo Chev again proving the best with a 7.9 s 189 mph run.

Of the big altered's, it was again Dave Stone's year, the 427 Chev powered "T" hitting some incredible speeds at Silverstone, ending up with a best of 198 mph in 7.7 s. Phil Elson and Mike Hall took some time getting into the eights with their hemi powered cars, but both eventually made it, although neither could really get to grips with Stone's Chevrolet.

This was joined at the end of the season by Keith Harvie's imported methanol burning Chev altered, capable of running 7.0 s in

America, but gearbox troubles kept the car from performing as expected, an 8.7 s being the best so far.

In Top Fuel, the first half of the year was a bit bleak, with the usual twosome being unchallenged at the top, neither pushing their expensive machines too hard, but by mid-season things had hotted up, with Skilton running a 6.50 s at Santa Pod before crashing, and Priddle replying a couple of meetings later with a string of mid sixes terminating in a 6.49 s, also at the Pod. He had earlier destroyed his Donovan engine at Blackbushe and was grateful to his sponsors for coming up with the finance for a new one, almost as soon as one could be flown in. Roz Prior moved to Top Fuel at mid season by buying the old "Mister Six" from Priddle and got down to some very respectable low sevens by season's end, managing a run of 208 mph at Snetterton.

But the big news came with the arrival of two new rear engine machines, one built here by Nobby Hills for Mike Hutcherson to drive, the other imported by Pete Crane and Ray Edmundson, and both powered by Ed Pink motors. Both were in the sixes almost immediately, but the terrible weather over the last few meetings stopped either from improving substantially, but they had got better at every event, with Crane's lighter car certain to get right down with the front runners this season, and Hutcherson's perhaps a tenth slower.

In Top Dragster it was Gerry Andrews, also of the Stone's team who had it all his own way after Roz Prior moved up to Top Fuel. Before this she had run many races with him with her 454 Chev dragster, hitting an 8.3 s to his 8.1 s best, but winning several with some pretty sensational starts. Through the mid season, Andrews was virtually unchal-

Dave Stone's Tee Rat gets a little out of line exiting the bleach box at Snetterton.

