

THE ALLARD REGISTER

President:

TOM LUSH
U.K.

Vice-President:

FRED G. WACKER, Jnr.
U.S.A.

Hon. Secretary

R. W. MAY

8, Paget Close, Horsham, West Sussex, RH13 6HD. ENGLAND (Telephone:
Horsham 61372)

Mid-West U.S. Correspondent: Don Hudgins, 130, E. Bodley,
Kirkwood, Missouri, 63122, U.S.A.

THE BULLETIN

~~July~~ / August,
1977

Page 1.

FITTING HILBORN FUEL INJECTION TO AN ARDUN-MERCURY J. 2.

We have received the following technical article from member Dean Butler of Cincinnati, Ohio, U.S.A.:-

"...The fuel injection was a real challenge, but don't let anyone say it can't be done! The injectors I used are 1952 Hilborn units. The pump is a BL 420 model (the same as used for Ford L-head Dragster in the 1950's).

The keys to making the injectors streetable are as follows:-

- 1) A priming system is required for starting. I used the electric pump that was stock on the J2. The line from this S.U. pump 'T's' into the line from the injector pump to the metering valve. The electric pump is used to start the engine. After about 10 seconds of running, I shut it off.
- 2) Use small injector nozzles. I used '5A' nozzles. Larger nozzles will cause plug fouling at low RPM's.
- 3) Use plenty of good fuel filters. I use 3, one in each fuel line at the tank (one line to the SU pump, one to the injector pump). I use a third filter at the output side of the injector pump. The filters are absolutely necessary, as the smallest specks of dirt will clog the nozzles and make the bypass valve (more on the valve later) stick open.
- 4) Use a one-way 'flapper' valve in the injector pump line at the tank. This will allow the line to retain its fuel and make starting easier.
- 5) Use a fuel shut-off valve (aircraft type) at the metering valve. This will allow you to shut off the engine by cutting off the fuel flow, and restarting will be easier. Also, this valve will let you start the engine when it floods -- as happens frequently on hot restarting. Just shut off the valve, and the engine should start from the fuel in the cylinder. Also, this valve will prevent all your fuel from siphoning into the engine if you park it with the tank higher than the injectors!

Note from the photos that I made a special cam gear cover to carry the injector pump. That way I am able to run the generator in its normal position. The front cover is made from a stock Ford aluminum (1949-53) unit for a vertical drive distributor (Vertex magneto in my case). I heli-arc'd an aluminum disc to the front cover and machined it properly to accept the injector pump. Of course I had to use a 1949-53 type cam. The cam was drilled and tapped to accept a long drive for the injector pump. When you drive the injector pump this way, it is smart to run an oil line to the pump to keep the seals lubricated. I ran a line from the return from the oil cooler.

The fuel lines absolutely must be of the highest quality, to prevent fuel pressure fluctuation. I used aircraft lines wrapped in braided stainless steel. I also used high quality aircraft hose fittings to prevent air leaks. I found out the hard way that the slightest air leak will cause no end of headaches. I also found that the original Allard fuel shut-off valves leak air no matter what you do to them. I lapped mine with grinding paste, and they still leaked, so I got rid of them.

One thing you must do is use a relatively mild cam, or you'll just pump raw fuel past the exhaust valves during overlap. I am using an Iskenderian 'Crossflow #1", and it seems ideal with its 265 degrees duration.

If anyone else is interested in trying injectors, I can give them more details -- and a shoulder to cry on. It took me about three months to make the thing work, and it still acts up once in a while. Usually it is just dirt in the bypass valve. I forgot to mention this valve earlier. The Hilborn system pumps far more fuel than the engine can use, so a bypass line returns unused fuel to the tank. This line has a spring-loaded valve to help keep up fuel pressure at idle. It also has a 'pill' with a hole in it to meter fuel. The bigger the hole in the replaceable 'pill', the

/continued on Page 2.

Continued from Page 1.

leaner the engine will run as more fuel will return to the tank.

The return line must not be close to the injector line pick-up. I found this out the hard way, too! If the return line sprays fuel near the pick-up, you get bubbles of air in the line. It took me weeks to figure that one out!

The injectors seem to be worth the trouble. I guess the engine to be turning out 350-400 horsepower on its 284 cubic inches. Compression is 12:1, stroke is $4\frac{1}{8}$ inches and bore is $3\frac{3}{16}$ inches. I'm using strapped mains and a 1950 Lincoln oil pump. This pump puts out over twice the volume of the Ford pump, and is ideal for the extra oil requirements of the Ardun. I'm using a 16 pound aluminum flywheel and a $10\frac{1}{2}$ inch Schiefer clutch. All this is connected through Zephyr gears to a 4:11 rear.

Enclosed are a few photos of the fuel injected Ardun engine in my J2.

Keep up the good work with the Bulletin. I can't wait to read each issue....."

Many thanks, Dean, for sending us this most interesting article, and also for the fine photos of your engine. Thanks, also, for your kind remarks re the Bulletin. ED.

Our Hon. Secretary writes:-

"Whilst on holiday recently on the Continent of Europe, my wife and I had the pleasure of meeting Member Dr. Pierre Haverland, who is now the proud possessor of J2R Allard, chassis No. 3402. Pierre had kindly taken the car out of the garage into the bright sunshine, and we took several photos of it, unfortunately minus the bonnet. This was at the panel-beaters, as the previous weekend, whilst competing at the speed hill-climb at Alle-de-Semois, which is situated in southern Belgium, Pierre had hit the straw bales on one of its many corners. After close inspection of this most interesting car, Pierre invited us in to meet his charming wife, and over refreshments, motoring conversation continued. He advised us that various competitive events are organised by the Belgian Racing Automobile Vintage Organisation (B.R.A.V.O.), and from copies of the Club's bulletins, it appeared that he is one of the leading personalities. We noted that the racing number on each side of the J2R was No. 4. and Pierre informed us that B.R.A.V.O. has allowed him to race under that number. As members may know, No. 4 was Sydney Allard's number on that car for the 1953 Le Mans 24 Hour Race. After this very interesting meeting we bade farewell to Pierre and his wife and headed south-west to the Belgian Ardennes and France.

Some ten days later after holidaying in Brittany we turned towards Paris via the beautiful Loire Valley, where we stopped off to call on ex-Allard racing driver, Mr. Jean Davidson. Members may remember that he was placed second in his J2 to winner Fred G. Wacker, Jr. (our Vice-President) also driving a J2 at the Sebring 6 hours race in 1950. After initial salutations and greetings, Jean suggested that we accompany him to his garage, as he had acquired a rather interesting car. Under a tarpaulin was something very long, low and sleek. Pulling off the cover, there was a 4.9 litre Quadroperto Maserati Gran Turismo. A fabulous machine, with a really sparkling performance: 110 MPH in 3rd gear, 140 in 4th and 170 plus in 5th. The idea of being taken for a run in this car was dashed as Jean had previously told us that his back was again giving him a spot of pain. From time to time he gets a recurrence of this following an accident sustained whilst motor-cycle racing before the war. However, I was very pleased to be handed the ignition key and told to take it out. To try and describe the general handling, comfort and road-holding would be impossible. It was superb. All too soon, my wife and I returned this most desirable form of transportation with many thanks, said our farewells and headed for Paris. Here we had the great pleasure of staying with Member Jim Donick and his wife. They made us extremely welcome, and during our stay we inspected Jim's K2 which he maintains in fine condition. He also took me for a run in his French Matra 530 and my first impression was that the cornering ability of this car is quite outstanding. During the run, Jim suggested I take over the driving and I found it had a fine performance from its 1500c.c. motor. The following day we proceeded to the Channel port and home, to find a note awaiting me from the local book shop saying that the book "Allard - the inside story" by our President, Tom Lush, which I had ordered before going on holiday, was awaiting my collection."

In a letter from Member Len A. Bunn of Bahrain, Persian Gulf, he writes as follows:-

"....Thank you very much for the most recent newsletters which are always gratefully received and read from front to back on numerous occasions by my wife and myself whilst we wait for the next one..... I have now at last found a motor club here in Bahrain called, would you believe, "The Bahrain Motor Club". Not very original but at least functional. It is situated not far from the main town known as Manama, and a new clubhouse is progressing well, with the foundations just about laid. A fairly heavy work party will soon be needed to erect walls and roofs, so if anyone is passing through Bahrain don't forget to pop in!!

/continued on Page 3.

/continued from Page 2.

"A pleasant morning was had by quite a few, some months ago, during a mini hill-climb, when some new timing gear was tried out on the resurfaced hillclimb. The lack of crowds made the event less strenuous on the nerves than it usually is for both officials and competitors alike. One of the members played with the buttons to excellent effect and the new gear worked quite well, apart from the finish beam problem which was 'sorted' before the meeting closed. So, after an energetic sweeping party had cleared the way, off they went. Regrettably quite a few suffered from class amalgamation, but it was quite a tussle in class A/B between a 'super mini', 'concrete Alfa' and a Celeste. That's the order they finished in, although not without some pushing from a Lancer and a certain Datsun that seemed to buckle when it went round corners.

Two Alfas decided to fight it out between themselves in class C/E, and Roger Bird would have made it, but Simon Bird got the creases in his overalls all straight and showed us all how it should be done to record an F.T.D. of 27.79. A yellow Porsche looked lovely but could only manage 29.02....."

Many thanks for your letter re motor sport in the Middle East, Len. So glad you and your wife like reading the Bulletin. ED.

Member Ron Cook writes:-

"Dear Editor - After becoming a member of the Register in January, 1977, I feel I must write to express my thanks to you for your prompt attention to my correspondence, (I don't expect many other Registers can boast return of post replies).

Also, through your Bulletin, if possible, special thanks to John Patterson and Ken Miles for the invaluable help so far given to enable me to get my '47 L type roadworthy for this summer. John arranged the supply of a new 24 stud Mercury engine for a very reasonable price and even delivered it, involving a round trip of approx. 250 miles!..... Also, would any other L type owners please contact me with a view to perhaps meeting them, as up to now your Bulletin appears to cater more for the Competition or 'Special' type car, and I would like to meet another L type owner for obvious reasons....."

Many thanks for letter, Ron. Your kind comments are much appreciated. ED.

For other Members with L types, Ron Cook's address is: School Cottage, School Lane, Southam, Nr. Cheltenham, GLOS. Telephone Cheltenham 38813.

FOR SALE

ALLARD K2 roadster, 1951. Fully restored, in excellent condition. Painted in original British Racing Green, seats and panelling executed in natural brown leather. Body No. K.2242. Motor No. 7262014. Price SwFr. 39,000. Please write to Mr. J. P. Burckhardt, Bahnhofstrasse 14, 8942 Oberrieden, Switzerland. (Note: Our Hon. Secretary has photographs of this car)

WANTED

MERCURY 3.9 litre V8 engine in new condition or nearly so, or address of any supplier. Also any K1 bits at all. Contact: Clive Richardson, 45, Whetstone Lane, Aldridge, Walsall, West Midlands. (Telephone: Aldridge 56302)

FOR ALLARD L TYPE. 1) $\frac{1}{4}$ bumpers for front; bumper for rear (excluding brackets).
2) Good steering wheel, if possible 'Brooklands' type.
3) Starting handle. 4) A spare wheel with reasonable tyre.
Contact Ron Cook, School Cottage, School Lane, Southam, nr. Cheltenham, Glos.
(phone Cheltenham 38813)

Member Chris Bass is in need of garage space for his P1 saloon. He would like to know if any fellow member knows of a suitable secure, weather-proof garage space. Ideally he would like somewhere with room enough to carry out some work under cover and an electrical supply. Any reasonable rent could be met and any preparatory cleaning up or renovation of the premises should not be a problem. He would be very grateful of any offers. He concludes his letter by saying that the Bulletin never fails to brighten his day when a new issue arrives. Please contact him at 15, Effingham Court, Constitution Hill, Woking, Surrey. GU22 7RX. ('phone Woking 67413)
Do hope that a member or friend can assist you, Chris. Thanks for your kind comments on the Bulletin. ED.

Our Members are invited to:-

- (Entry forms from our Hon. Sec.)
1. The Yeovil Car Club's Festival of Transport, 13th/14th August.
 2. Horsham Lions Vintage Transport Rally, 29th August.
 3. The Veteran C.C. of Czechoslovakia 6th International Veteran Car Rally, 1st to 8th October. Accommodation and 80 litres of petrol free.

For 'Welcome to new members' see next issue.