SPORTS CAR ASSOCIATION.

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Hon. Secretary. R. W. May, 8 Regent Close, Horsham, Sussex, RH13 6HD.
(Telephone, Horsham 61742.)

Mr. Jim Harper of Wynnewood, Pennsylvania, was the founder and Honorary Secretary of the Allard Owners of America during the middle 1950's.

In recent correspondence with our Hon. Sec., he writes as follows:...."Some people don't know that the J2X Allard featured in Automobile Quarterly, Summer 1970 edition, was my car and that I put the publisher in contact with the present owner. The only comment I could add to the article was that Don Vorderman (The Editor) was surprised how well the car stopped. I guess he didn't see the special power brake unit I had installed behind the passenger seat. I put that on when I heard that Fangio had power assisted brakes put on his Maserati racer."....

This is most interesting, Jim. When you owned the car, it was the finest and best kept example of the 'marque'. It's nice to know that the new owner appears to be keeping it that way also. ED.

RESTORING AN ALLARD J2. By Ian McDonald.

I feel some hints gained from a two years job of restoration, and many hours of work, might be of help to other J2/J2X owners.

Initially I faced something of a dilemma in that a 3-way J2 was needed, meaning a practical three-way combination of road car, show car and sometime historic racing car. Thus most of these hints should be read in this light.

Firstly, steering and suspension: As wheel wobble can be a problem in J2's, I fitted a VW Kombi steering damper as a precautionary measure. This small unit can fit out-of-sight (mounted to a tie-rod end clamp).

Next step to make the steering more precise, after reconditioning the steering box (which is a straight forward job), I converted the centre pivot "metalastik" bush to a top and bottom ball race; in my case, using a Chrysler Valiant steering arm conversion kit. It is well worth the effort.

For ideal road-holding, my car was set up with nil degrees camber, six degrees castor, and no toe-in. For car shows and road use where the typical Allard "cambered look" is desired, I made up two $\frac{3}{8}$" spacer rings which fit beneath each shortened coil spring. (This was a far quicker job than fitting the other full length coils I had as spares.)

Rear suspension remained unaltered except for $\frac{2}{4}$" lowering and stiffer shock absorbers.

The front suspension definitely works best with the original J2/J2X shocker settings.

For best performance, the right diff., ratio is essential and with the J2, an owner is fortunate in being able to change ratios relatively quickly. However, beware of the diff., mounting, as this includes a structural weakness (i.e. if your car is putting out a lot of torque). My car has two extra housing mounting brackets welded longitudinally above the diff., The side housing mounting plates bolt to these as well as to the frame at each end. Additional strength around the spring saddles and panhard mounts is also definitely recommended.

For best acceleration and good general road performance, I use a 4.2 : 1 ratio diff., With 300 b.h.p. at the flywheel, this gives a J2 a 13 to 13.5 Seconds quarter mile time. For historic race meetings I used a 3.5 : 1 ratio, which can give a top speed of 141 m.p.h.

In 1968, I was keen to acquire a limited slip diff., but have since changed my mind. By means of the simple exercise of getting a friend to drive the car through a particular corner, I was able to observe the

suspension in motion. This showed that the De Dion system works splendidly with almost equal wheelspin from both back wheels; hence the doubtful reliability of a limited slip diff., does not appear warranted.

An essential for the rear end - if you enjoy spirited driving - is a pair of thicker rear axles from a special top quality steel. A 3/16 " increase in diameter is quite practical.

The biggest single factor in improving a J2's roadholding and safety is the fitting of good racing tyres. I suggest 6.50 X 16" Dunlop "Greenspots". Going down to 15" wheels might be expedient from a tyre supply point of view, but a J2 somehow doesn't look as well on smaller wheels.

My five litre engine uses a conventional Edelbrock triple carburettor manifold, which has apparently helped a great deal in achieving good horsepower (230 b.h.p. at the back wheels at 5,000 r.p.m.). This is with only 8.5 : 1 compression, so I suggest if you can afford good brand speed equipment, buy it. It will probably give you the horsepower you need without fiddling or fuss. Ditto with cam timings and valve springs and valves.

To be concluded in the next issue.

WILL TURBINES RULE GRAND PRIX RACING? by E. S. Young.

The eery whoosh made by the Lotus 56B in the Race of Champions just could be the noise of the future in formula 1 - unless the regulations are framed in such a way as to keep turbines uncompetitive.

The Pratt & Witney turbine in the Lotus is a detuned helicopter unit that costs a small fortune to buy, but it's super-reliable and needs an overhaul only after 1,000 hours. In Grand Prix terms, that means once every ten years! Which makes peachy reading to entrants with the Ford-Cosworth V8s that usually require a strip-down and check or a rebuild after every race!

If you can fathom out the complicated formula that restricts the horsepower of the turbine from its listed figure of over 1,000 horsepower to around half that, you will realise that there are definite possibilities. The turbine isn't exactly running on the ragged edge! One problem is that the Pratt & Whitney unit is one of the only gas turbines that can be adapted for racing.

Colin Chapman realised the potential of the turbine in a formula 1 car when he built the wedge-shaped Lotus 56 cars for Indianapolis in 1968 using the Ferguson system of 4-wheel-drive. Joe Leonard set qualifying records for the 500 mile race, and he was leading until almost within sight of the flag, when "the fire went out". Enthused by the tremendous performance of the Lotus at Indy, Chapman returned to England eager to build a Grand Prix copy-car and he laid down plans for three Grand Prix turbines in 1969. But those plans foundered when the turbines became unavailable, so Chapman channeled his ideas on 4-wheel-drive into the Lotus 63 for 1969. One of his few mistakes. In fact, there was one special car built for formula 1 to take the turbine before the plans were scrapped, and this wedge-shaped tub sat under dust covers for two years before a turbine became available and tests started again.

CHECKING THE CAUSE OF BURNED POINTS.

The problem: frequent replacement of distributor breaker points due to burning. Reaching the solution to the problem may not be quite as elusive as it appears, if you follow the suggestions of the engineers at Champion Spark Plug Co.,

On occasion, the culprit may be a ballast resistor with too low resistance. Another source of trouble could be a by-pass circuit that is not opening as it should. Checking these two items is quite simple.

First, connect a voltmeter from the battery side of the coil to a good ground.

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With the engine running, check the indicated voltage. If the voltage is on the high side of specifications, chances are that the by-pass circuit is not operating properly. When this happens, the full system voltage (about 12 to 14-1/2 volts) can flow to the points. Since the points are designed to take only 9 to 9-1/2 volts of current continuously, the extra voltage can cause damage in short order. In this situation, the ignition system should be checked for condition of connections and wiring.

Of course, there are many other causes which result in burned points. Some of the more common ones include: poor voltage regulation from the alternator or generator which can cause overcharging; an ignition switch left on when the engine stalls or to play the radio; a faulty condenser or capacitor; overlubricating the distributor cam or from oil that's worked up the distributor shaft from the engine; misalignment of points during installation, or grease on the contacts from greasy fingers.

MIXING CUBIC INCHES AND CUBIC CENTIMETERS

In North America, automobile engine displacements are measured in cubic inches. In Europe, the common measurement is cubic centimeters or liters.

To simplify comparison of engine sizes, Champion Spark Plug Company has put together this listing of figures.

When changing cubic centimeters to cubic inches, or vice versa:

c.c. X .061 = cu. in.

cu. in. X 16.39 = c.c.

When changing liters to cubic inches, or vice versa:

cu. in. X 0.01639 = liters

liters X 61.02 = cu. in.

c.c.	cu.in.	c.c.	cu.in.
100	6.100	4000	244.000
500	30.500	5000	305.000
1000	61.000	6000	366.000
2000	122.000	7000	427.000
3000	183.000	10,000	610.000

When changing cubic centimeters to liters divide by 1,000 simply by moving the decimal point three figures to the left. Changing liters to cubic centimeters, move the decimal point three figures to the right.

And when figuring miles and kilometers, use this formula:

Kilometers X 0.6214 = miles

miles X 1.609 = kilometers.

Impressions of a new G.T. model.

Recently introduced on the British market is the Hillman Avenger G.T. which is made in England by Chrysler U.K. In view of the fact that this car is built to a competitive price, it has a very full specification with a well appointed interior. From outward appearances it is similar to the standard model, but with the addition of 2 extra headlamps, special wheel trims, and small G.T. badges on

each side and rear.

Taking one's seat in the driver's position, the instruments are neatly pinned and reading from the left, they are: water temperature and oil pressure, tachometer, speedometer, and fuel and battery charge indicator. The steering wheel is small in circumference with three spokes, which are heavily padded. On the left of the column is the windscreen wipers (2 speeds) and washer control, and below this is the combined ignition key and steering lock. To the right of the column is the lights control and the trafficator lever which combines the head light main beams control.

The seating is comfortable and the leg room is good. The seats have cloth centre panels which not only have a warm feeling but also grip the occupant when cornering at speed. Seat adjustment is by a full width release bar and there is a side lever for the control of the angle of the seat backs, which will drop back to the full reclining position. The seating position is fairly high which makes for all-round good visibility. For reversing, automatic reversing lights are built in as standard.

Turning now to the mechanical side, there are many aspects on which it differs from the standard model. The engine is a 1498 c.c. 4 cylinder unit fitted with twin Stromberg carburettors, and has a compression ratio of 9·2 to 1. The camshaft is reworked, and the modified cylinder head has larger inlet valves. Another feature which is not fitted to the standard model is the exhaust system which has a much freer flow. It is fitted with radial tyres.

First impression of driving the car on the road is that all the controls are light yet positive. The clutch requires very little pressure to operate, and the gearbox is very smooth regarding gear selection, and it has synchromesh on all four gears. The steering is light, and the car corners well with little body roll.

Top speed is 100 m.p.h. and the normal petrol consumption is about 28 m.p.g. although 32m.p.g. is obtained when touring. The zero to 60 m.p.h. time was 12.50 secs, which is better than many more expensive sports and G.T. cars.

FOR SALE.

Allard P type saloon. Chassis No. 2189. This car is without - Radiator, grill, windows, and other small parts, but would be useful as spares. Offers to, A. F. Warne, 20 North Ham Road, Littlehampton, Sussex. ('phone L'ton 6595.)

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WANTED.

Very urgently required, grille for J2X. Contact immediately, Dr. R. McKee, 801 Green River Trail, Fort Worth, Texas, 76103, U. S. A.

ECONOMICS CORNER.

New Dealism:	If you have two cows you shoot one, milk the other and pour the milk down the drain.
Communism:	If you have two cows, the government shoots you, and then keeps the cows.
Capitalism:	If you have two cows, you sell one and buy a bull.

Always try to drive so that your licence will expire before you do.

Sign on a Mississippi garage:
Ring three times for night service - then keep your shirt on while I get my pants on!
