

THE ALLARD REGISTER

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THE BULLETIN

September/October, 1976.

Page 1.

Member Len Bunn writes us from Bahrain, Persian Gulf, as follows:-

"...There are unfortunately no motor racing sports held here with the exception of motor cycle scrambling which is held in the winter months. I have seen no interesting or unusual cars in this area with the exception of a replica of a model T Ford which I hope to get a photo of shortly. With petrol at 10p a gallon here the American Car is in abundance. Due to political problems there are very few British Cars, and Spares for them are very scarce so they have become nothing more than death traps. I have purchased a BMW 2000 the performance of which is very good but does not match up to the Allard of course.

The highway code is very rarely adhered to and one can overtake on the inside or outside lanes at your own risk.

I guess that's all for now and I look forward to my next Bulletin. By the way temperatures are at about 110°F at the moment and it tends to get very sticky!! Don't forget that if at any time you or any of your members would like to come to Bahrain you are always very welcome...."

Thank you very much, Len, for your interesting letter. If petrol was 10p a gallon in this country our members would be fitting their cars with 7 litre engines. ED.

In a letter from member Bert Fredrickson of Verona, Wisconsin, U.S.A. he writes:

"...I have worked very hard on my Allard, and it sure looked real nice, and had it in three parades. Very pleased to report that I won an award..."

Good show, Bert, and thanks for letting us know of your success. ED.

Our Hon. Secretary wishes to thank member Frank Bursinger of Los Angeles for sending him copies of the May, June and October, 1952 issues of 'Road and Track', also the December, 1950 issue of 'Motorsport' which was published in Silver Spring, Maryland. One of the pictures in 'Motorsport' shows cars about to end the paced first lap of the 1950 Watkins Glen Grand Prix. The three leading cars are all J type Allards (two l.h.d's and one r.h.d.). The winning Allard was driven by Mr. Erwin Goldschmidt.

In a letter from member John Peskett, of Leicester, England, he writes:-

"...Have been doing a bit of sailing recently and won a bottle of whiskey and a Haig tee shirt in a race at Falmouth in a $\frac{3}{4}$ ton cup boat - not as fast as an Allard, but still fun. You have to hang out over the side on the straight bits, not just round corners..... Several people came up for a chat at Prescott Hill-Climb, including member Des Sowerby..... I do like the Allard reminiscences in the Bulletin. Keep up the good work...."

Many thanks for your interesting letter, John, and your kind remarks about our Bulletin. ED.

GEARBOXES IN ALLARDS.

This article is intended to assist all those whose cars suffer from the perennial Allard problem - gearbox trouble. It covers all Allard cars which ever used or could use the Ford 3-speed gearbox.

What is wrong with the Ford 3-speed gearbox?

Apart from having poor ratios, a slow change and weak synchromesh, the basic design flaw in any Ford 3-speed gearbox is the use of a sliding gear on the mainshaft which is used in first and reverse gear positions. Because it is not a constant mesh gear, it has to be made (with considerable backlash) a sufficiently 'loose' fit when meshed with other first and reverse pinions to slide easily into and out of engagement. This means that when it is engaged it does not have the close

/continued on Page 2.

continued from Page 1.

tolerances, wide rolling area, and little backlash that are usual with constant mesh gears. The main reason for its failing seems to be the high shock loads imposed on the teeth when extra backlash necessitated by its design is suddenly taken up such as when lifting off sharply after a burst of acceleration in first gear, or when suddenly accelerating again. Shock loads like this can so weaken it that it finally breaks, even under low load, such as when shunting back and forth into a parking space. The second trouble is that the narrow area of tooth contact (caused by the pinion's narrowness and its loose fit) means that the teeth wear rapidly on the contact portion both on drive and on the over-run, and are soon undercut. The hardening (though deep) wears through or flakes off, and the teeth break. This first and reverse sliding pinion is the main cause of trouble and nothing can be done about it. If it is in good condition it will last longer, but in a hard driven Allard it cannot be expected to last for ever since loads are high and shock loadings likely to be frequent.

The third trouble with the Ford 'box is a tendency to strain the front constant mesh gear on the layshaft cluster. This is really because the numerical ratio between the two constant mesh gears is far too high, putting too great a strain on the larger gear. This trouble is accentuated if layshaft bearings or first motion shaft bearings are worn.

Finally, the Ford 'box tends to jump out of second gear on the over-run once it is slightly worn. Since new spare synchro hubs and thrust washers, let alone layshaft clusters are now almost impossible to obtain, one has to make do with the best secondhand spares obtainable. Top change V8 gearboxes are now very difficult to find, and side-change ones not much easier. The side change 'box seems stronger and has a better synchronising arrangement, and its internals will fit a top change 'box provided the front selector yoke on the top-change lid is cut, widened and brazed up again. It may also need a little filing down to persuade it to fit in its groove in the synchro hub. To overcome a top-change box, it is therefore a good idea to fill it with side-change internals and take some trouble to pack the various thrust washers with shims to get its clearances within the limits specified in the handbooks. Flush it out really well before filling it with clean Castrol 90 and you've probably done the best you can with it. A Ford 3-speed V8 'box is very easy to dismantle and re-assemble. Take a little trouble over the clearances and it might last longer than you'd hoped.

Why not discard the Ford 3-speed gearbox?

This is a good idea, but the trouble is it's about the only 'box that will fit easily into the rigorously defined space available in any Allard between the Ford engine and the torque tube, and modifying another gearbox is likely to be expensive. For competition work a different gearbox could be a big advantage, even if it's only one that you don't have to mend after every hill-climb or speed meeting. One 'box that will fit easily is the Ford 4-speed 'crash' commercial box that was made concurrently with the 3-speed gearbox. The best one is a WOT 2 jeep gearbox, which fits straight on to the engine and has a special universal joint to mate it to the car propeller shaft, it's unbreakable but all the ratios are very low. The first gear on this 'box is so low as to be almost useless, unless your work involves uprooting trees, when this could be very handy! Your car may also sound like a lorry! WOT 2 'boxes can be adapted to fit if you have the mainshaft splines machined to take a car universal joint and modify the rear mountings where necessary.

Assuming you have a torque tube Allard your choice is limited to a commercial 'box or one of a few car gearboxes that can be modified to fit. Most 4-speed car 'boxes are longer than the Ford by at least 2 inches, so you either have to chop 2 inches out of the torque tube (fairly easy on long chassis K, L, M and P types) or you move the engine forward. Choice of gearboxes is limited. You need a short tough gearbox, and the Jaguar 3.4/3.8 is probably the favourite. Secondhand spares are readily available, and it is a strong 'box. Put together properly it shouldn't break, won't jump gears, has nice close ratios, fair synchromesh, and a much faster change than the old Ford 'box. However, don't expect miracles - it's a Moss 'box not a ZF! Other gearboxes that might do are Armstrong Siddeley 345 (all synchro similar to Jaguar), Humber Super Snipe (all synchro), Mercedes (various but side change).

To fit a Jaguar 'box between the torque tube and the Ford engine or bellhousing is feasible provided you have time, and the facilities of an engineering shop. You retain the Ford clutch and bellhousing.

We understand that the procedure is then:-

1. Dismantle the Jaguar gearbox.
2. At the back of the Jaguar 'box fit flat Jaguar overdrive rear plate, then a $\frac{3}{8}$ " steel plate behind it with an oil seal in. The aluminium overdrive plate located the shafts and bearing and the steel plate is tapped for the six torque tube anchorage

/continued on Page 3.

/continued from Page 2.

- bolts. File down a speedo drive gear and use this as a spacer on the main shaft to bear on the oil seal and locate the Ford U.J.
3. Machine the Jaguar mainshaft to fit the Ford U.J. and cut a little off the end to locate the U.J. in the right place. Tap the end for a U.J. retaining bolt.
 4. Saw the gearbox part off the Ford bellhousing just behind the dividing wall. Surface grind this leaving a reasonable strengthening rib.
 5. Make up a $\frac{3}{4}$ " adaptor plate in steel which is recessed to clear the Jaguar first motion shaft cover and bolt to the front of the Jaguar gearbox with recessed $\frac{3}{8}$ " cap screws.
 6. The Ford bellhousing is then centred on this and ten holes drilled through the bellhousing rear wall and into the $\frac{3}{4}$ " adaptor plate. These are tapped $\frac{1}{2}$ " and used to bolt the bellhousing on. Location of these is tricky and must be as evenly spaced as possible.
 7. The Jaguar first motion shaft is then machined to enter the Ford clutch plate.
 8. The whole is then carefully assembled and fitted, and the engine has then to be moved forward unless the torque tube has been shortened.

For models J2 and J2X

If you have a J3 or J2X the one obvious 'box is an Alvis Speed 20 or 25. It is unburstable and can be fitted with an open prop-shaft front and rear if you have a J2X, or with a torque tube on the back if you have a J2. Its only trouble is a tendency for the gear change to become very stiff or locked up at high revs., due to the oil centrifuging and becoming almost solid inside the synchro hubs. It may help to drill little drain holes to let the oil escape. This 'box has its own internal oil pump and is fully synchronised. The synchro is so good it's the only gearbox known that if the clutch release fails, it can be used as an automatic (with strong manual assistance). Push the lever hard against first gear and the car will start to roll, and as it gathers speed the lever will snick home and you're away. Gear changes are simpler once you are moving.

Finally a word of consolation. If your gears are broken and you can't afford a new 'box, just jam it in top and ride the clutch. There wasn't a V8 Allard built that can't start in top gear. Remember the late Sydney Allard finished 3rd overall (1st in unlimited class) in the 1950 Le Mans 24 Hours with the gearbox locked in top gear for the last 10 hours of that race.

Editor's note: We await with interest a report from a member in Pennsylvania, U.S.A. of transmission modifications and the fitting of a late model Ford 3-speed all synchromesh gearbox adapted to the closed drive line of his 'P' type sedan.

 We extend a very warm welcome to the following new members:-

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|-----------------|--|----------|
| E. Ardler | of Port Jervis, New York, U.S.A. | - |
| B. Macpherson | " Mairangi Bay, Auckland, New Zealand. | 91P 1958 |
| Dr. P Haverland | " Villers-Saint-Simeon, Belgium. | J2R |

Vintage Prices (Peterborough, Daily Telegraph, 11.8.76)

Japanese collectors are waiting up to two months for delivery and paying phenomenal prices - over £30,000 each - for vintage British cars.

A week-long show in Tokyo recently brought £500,000 of orders and had to be extended because of the scale of public interest. Some of the new owners are having to wait months for delivery while the cars are found in Britain. Status underlies it.

FOR SALE

Allard K1. The famous Len Potter Alpine Cup winner, Reg. No. JGP 467. Very good original condition with long M.o.T. Price £1,900 or ~~£~~4,500.

also

1955 Aston Martin DB2/4 Mk.1. in very good condition. Price £1,450 or ~~£~~3,400.
 Further details of both from J. Peskett, 22, Wakerley Road, Leicester. LE5 6AQ.
 (Telephone: Leicester 737802)

WANTED

Pair of front wings for Allard K type roadster. Contact Lord Cranworth, Banham International Motor Museum, Museum Office, Grundisburgh Hall, Woodbridge, Suffolk, IP13 6TW. ('phone Grundisburgh (0473.35)202.

 SIGN at a level crossing in Alabama: Don't race trains to crossings. If it's a dead heat, you lose.