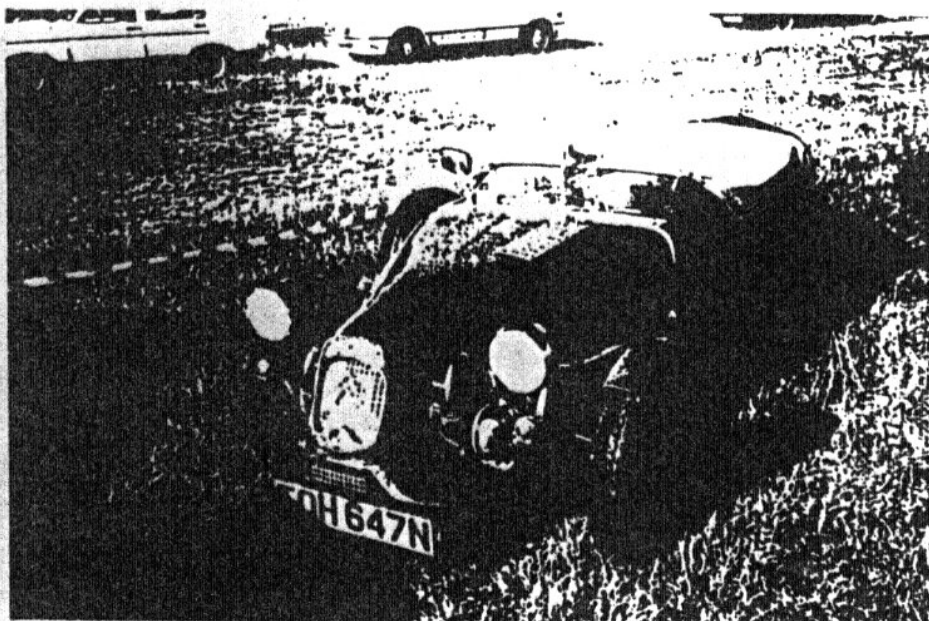


VISA ENGINE AND 4 SPEED BOX

LOMAX NUMBER THREE - by Peter Davies TOH 647N.

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TOH 647N as seen above does not look any different from the majority of Lomax 223's. If you walk round the car your suspicions might be aroused either by the lack of exhaust pipe on the near side or the omission of the bonnet bulge for clearing the alternator. Reach the off-side rear and what do you see but a three inch pipe chrome pipe protruding through the body tub just below the boot floor - the poser! TOH is based on a modified Lomax chassis, Ami Super 8 suspension, 4-speed GS gearbox, instruments and wheels, Visa 650cc engine, bell-housing, steering column and wiring loom. Other miscellaneous parts including alternator and pedal assembly are 2CV or Dyane. Was it worth it? Yes. Having built two Dyane based cars, a rolling chassis and a Marlin Roadster I was certainly looking for a new challenge and the beauty of the Lomax is the opportunity to do your own thing. Most of the ideas have been tried before and "Flat Out" has been great inspiration throughout the build. Some of the highlights, problems and benefits are discussed below.

The Visa engine, apart from the obvious advantage of the 10% increase in capacity, has the benefit of electronic ignition and computer controlled timing which derives its signal from sensors in the bell housing. As the Visa has out-board brakes an alternative gearbox which can be split behind the bell-housing is required. The 4-speed GS box fits neatly and has much improved gear ratios (the Ami Super 8 gearbox would work equally well). I calculated that bottom gear is 50% higher than the Dyane's and top is 10% higher with other gears nicely spaced in between. Fitting involves exchanging the GS input shaft for the Visa one (it is held in by a circlip and is done without stripping the gearbox) and carving two holes in the Visa Bell-housing to clear the disc-brakes. The gearbox is slightly longer than the Dyane and has a different gearbox mounting. My solution was to salvage the mounting plates from the Super 8 chassis and weld them to a new 50mm square section tube immediately in front of the steering rack. I probably allowed too much clearance and when I came to drop in the engine and gearbox it did not clear the X-member at the front of the chassis; this was cut out and extended by 40mm.

The Ami Super 8 spring members do not fit to the chassis in the same position as the Dyane and hence the chassis should be purchased without the pick-up points welded on. I interconnected the rear suspension arms with a solid beam over the axle tube and specified a petrol tank with a "side entry" filler pipe. This makes the suspension quite firm and, while I consider it essential on Dyane based cars, it is a moot point whether it is necessary on the Ami. The advantage of starting with the Super 8 chassis, apart from the stiffer springing, is that the drive shafts connect directly onto the gearbox without the need for spacers, the track control arms are angled in such a way that 4.5J GS wheels fit straight on. I used Dunlop 135 x 15 tyres.

The Visa steering column is double jointed like the Ami, has a conveniently placed ignition switch but is too long. I cut off the spline at the steering wheel end and welded on a boss to take a 15" wheel sourced from an MGB. The futuristic Visa switch gear has no place on a Lomax and I used the GS column mounted switches. I found the Visa wiring loom good and long enough to reach the Cibie headlights which come with about 18" of wiring of their own. GS instruments present no problem.

All my cars have been built with the induction and exhaust system as close as possible to the original configuration. This car was to be no different! The Visa exhaust runs under the middle of the car with the two cylinders feeding into an expansion box that starts behind steering rack and runs towards the rear; the rear silencer is far too large and was abandoned. The central pipe was diverted in front of the rear wheel to the off-side and hence to the "posing bit". My determination to keep the "hot spots" standard meant that the alternator had to move; I found that there was just room for a 2CV alternator in front of the carburetor but not the one from the Visa as it is longer as it comes complete with it's own rectifier. This place is normally occupied by the filler/breather; my solution was to fabricate a hollow box section picking up the tapped holes for the breather and hole that located the oil cooler onto this were mounted the pivot points for the alternator. One end of the box section was blanked off and the other led into a round pipe running under the inlet manifold towards the rear. A further support was made using one of the top bellhousing studs and the unmodified breather was located here lying at an angle to clear the bonnet. The standard Visa air cleaner was mounted on the bulkhead and connected to the carburetor via a flexible tube and the traditional GS pipe.

The gearchange is GS shaft from the box connected to the Visa floormounted shift and it has the conventional gate pattern with first opposite second etc.

Problems! Change the input seal to the gearbox at the same time as you change the input shaft, I didn't and it cost two evenings work to replace it later. The Visa has two wires feeding into it's rectifier, (+12v) the Dyane unit that I used only has one, what do you do with the other! Either seems to work. Brian Widgery who has bought the car from me still has to solve this one and I am sure he would appreciate any advice that may be forthcoming. The carburetor I am using is not the one originally fitted to the engine (it had been vandalized) and the engine does have a distinct flat spot when the throttle is floored. It is so bad that one has to get used to feeding the throttle. Again any advice would be welcome.