The Cover Story - Foxy Lady



'Foxy Lady' is the culmination of a lifetimes ambition to build a 'special'. Over the years, I have filled many pages in drawing books with different ideas, however, it was eventually Government legislation which caused me to focus on designing and building this three wheeler.

Any home built or heavily modified vehicle has now to undergo stringent Ministry testing before it can be legally used on the roads. The requirements for a three wheeler are based on motorcycle requirements and are thus simpler than for four wheel cars, in addition there are a number of tests, for example door locks and hinges and windscreens which cannot be applied if the vehicle does not actually have these features.

'Foxy' would have to be a rather spartan three wheeler but in what visual style? Modern streamlined was a possibility, but I was attracted to vintage - maybe something like a pre-war Morgan. And so the search for suitable vintage components began.

The engine chosen was a Chang Jiang 750cc side valve air cooled flat twin made in China producing about 20bhp. It's a derivative of the engine made by BMW in Germany before the second world war. The design and production facilities for this engine moved from Germany, through Eastern Europe, to China where vast numbers were eventually made. My engine was new old stock. purchased from 'Old Timer Garage' in Poland who also supplied a Ural gearbox having two gear levers; one of the four forward speeds and the other for reverse. The engine has electric start and has an alternator built into its front cover. Drive goes from the gearbox through a propshaft to a final drive made by Dnepr in Ukraine.

The spoked wheels, made by Dnepr have cast-in brake drums and wheel bearings (as did Bugattis). The brake back plates, shoes and slave cylinders are all from Morris Minor. The rear brake has a hydraulic slave cylinder operating on the foot brake mechanism from Dnepr and the handbrake uses the ratchet and pawl from a Mini.

Front suspension has sliders manufactured by a specialist as spares for pre-war Morgan 3 wheelers. Springs and dampers are custom.

The steering is by a transverse link attached to one end of a Mini rack and pinion and there is a Mini steering column with a detachable MG steering wheel.



The structure of the car is made from rectangular section steel tube MIG welded and covered by aluminium sheet pop riveted in place. Mudguards are fibreglass mouldings and seats are leather covered foam on wooden bases.

The car was built to comply with the MoT ‘Motorcycle Single Vehicle Approval Scheme’ and passed a 4 hour inspection at the Ministry testing station at Avonmouth - with flying colours.

Once the car was road legal a number of development issues had to be addressed. The engine power was very low and I doubted that it was even the 20bhp. Increasing the size of the carburettor main jet helped here, as did changing the ratio of the final drive from that of the solo motorcycle to one for a sidecar outfit.

There were also times when the clutch was reluctant to disengage and this turned out to be because the splines of the dual friction discs were sticking on the gear box splines. However, careful removal of burrs on the splines cured this problem.

I also found that the turning circle was very poor and required a design change to the steering arms to get a better Ackerman effect. It also proved necessary to increase the castor angle to provide better directional stability which was achieved by modifying the lower suspension arms to make them adjustable and setting the caster at 7 degrees.

With the exception of some machining for the front wheel spindles which was contracted out, all of the build was carried out by myself. Building started in February 2018 and the Ministry test was conducted on 4th March 2022. Best estimate for build time is 20 hours per week for about 200 weeks to give about 4000 hours.

But, time flies when you are having fun!

… Dick Mather