

Griffon 2000TDX (M)

C24

Designed and built by Fran Oakey



Four Hovercrafts were built by Griffon Hovercraft Limited for the Royal Marines and designated the 2000TDX (M). The machines were 11.9mtrs long, 4.56mtrs wide, 3.93mtrs high on cushion and they could carry 12–16 troops. The Hovercraft is powered by a single Deutz V8 diesel engine BF8L513LC, which provides the power for both lift and thrust. The lift air is generated using a centrifugal fan driven by a shaft from the front of the engine and the thrust air with a four bladed propeller driven from the rear of the engine via a toothed belt. A cruising speed of 33 Knots can be achieved over water with a full payload.

A couple of visits to the 539 Assault Squadron Royal Marines Depot at Turnchapel was arranged. So armed with cameras and tape measures three of us spent the couple of days photographing the four Griffons that had been in service with the marines for the last nine years. Having recently returned from Basra, they were a little worse for wear and at that time there was nothing in the pipeline to replace them. We took dozens of photographs and measured the craft from stem to stern. The Marines were tremendous hosts, even to the extent of fitting a gun on machine C23 for us to photograph.

The model was scratch built as a stand off scale model to 1/11th scale, the design being based on my model of the Enterprise. This model is again designed and built in three sub-assemblies, the hull, the cabin and the thrust unit. Construction is mainly from, 0.4mm hard ply 0.8mm hard ply, and balsa, which gives a light weight model but does make it a little less robust.

This model is depicted as the full size machine was set up for cooler climes. It took about four months to build and then over the following couple of years some of the scale detail has been added. Brushless motors were the most significant performance improvements to the Enterprise so they are being used in this model, for both lift and thrust, driving propellers designed for electric flight. These motors are more efficient and lighter than the can motors (brushed motors) previously used. With the experience gained from the Enterprise the weight has been reduced, which has also helped to improve the performance of the model.

A loop and segment skirt, with skirt shift, is fitted to the full size machines but the model sports the more easily produced bag skirt. The skirt has been designed to suit the bag and plenum pressures, as this was another of the significant improvements made to the model of Enterprise.

Control of the model is from a JR 388 transmitter; the throttle is used to control the speed of the lift motor, the aileron to control the rudder and the elevator to control the thrust motor. The transmitter has the capability to mix the control channels and this has been used to connect the lift and throttle motors to simulate the single motor of the full size machine. A helicopter gyro is connected in series with the rudder servo to help stabilise the lateral movement of the model at speed in windy conditions. Some working features have been fitted but there are still more to be added.

Since this document was first written the Royal Marines have ordered and taken delivery of their new Hovercrafts the Griffon 2400's. Data for these machines is currently being collected with the possibility to build a model of one of these new Hovercrafts. At the present time one of the original machines C21, which is in a poor state of repair, resides at the Hovercraft Museum.