1. Limitations and restrictions:

* Size restriction of bracket dimensions is set by current location of holes on the bulkhead.
* Weight – the weight and the movement of the engine will cause vibration and stress and strain. Our design must cope with those forces.
* In terms of restrictions we have to use lightweight materials that are easily mouldable
* The material must be able to withstand high levels of heat caused by the engine, therefore the engine must be able to withstand the heat.
* In terms of usage we have to increase the overall durability of the product and the materials.
* The material must be cost effective when making large batches of this product

Environmental conditions…

Use in the following environments…

1. Outside – use in dry and wet conditions – nonferrous metals.
2. Plane might have a long range journey and return in difficult conditions.
3. In hot weather conditions the material must be resistant from expansion
4. In extreme weather conditions it may have insulation.

Likely mode of failure…

* Shearing of bolts with wear.
* Need for regular service.
* Fluid expansion.
* Fatigue.
* Corrosion

Interpretation of given data:

* Reliability - quality control, alter the shape and material.
* Easy to use
* Cost – materials and manufacturing must be suitable for quantities of 1000
* Advanced functions – consider addition of gps to the unit