

Ejector Seat Force Measurement

Customer:

UK based aircraft ejector seat manufacturer

Loadcell:

F312-Z3255 40kN

Generic Type:

Shear pin loadcell

Special Features:

Replacement of existing part
High 'g' force protection



Sourced as an enquiry through our F312 shear pin design form web page, the customer required a small 22mm diameter shear pin loadcell to measure forces of up to 40kN. The loadcell would replace an existing pin in an ejector seat drogue parachute linkage. As the drogue parachute canister was launched with an explosive charge the loadcell would require protection to >1000 'g'.

A small, double ended shear pin was selected as a direct replacement for the existing component. Internal wiring was augmented with a polymer coating to provide 'g' protection. The design process worked closely with the customer to provide the optimum solution.

Calibration was undertaken using a Kevlar strap to replicate conditions in service.

