

case study

waterproof pin & rotary panel latches

aircraft availability

Any aircraft

part numbers

HA1166 & HA1051-1



*HA1166
Waterproof
pin latch*



*HA1051-1
Waterproof
rotary latch*



the problem

A customer had repeatedly experienced damage to cargo and also experienced interior wiring and other interior airframe damage that occurred during routine high-pressure water cleaning. It was discovered that the water was leaking through the existing cargo door latches, which were designed to be water resistant but could not keep water from leaking through the mechanism under all circumstances.

the solution

The customer came to Hartwell, a member of the McKechnie Aerospace Structures Group, to explore the feasibility of designing and manufacturing a replacement latch that fit the original access door form factors yet would create a completely waterproof seal and thereby prevent water damage to both cargo and aircraft. Through the process of Solutioneering, Hartwell worked with the customer to develop a unique, new latch design that combined two existing styles of latches to create totally water proof pin and rotary panel latches. The resulting latches can easily be retrofitted to existing panel doors and provide a number of design benefits over the original latch design.

the benefits

The latches were not only 100% waterproof but air-proof as well. Units are able to withstand up to 100 psi of direct water pressure, and in addition feature an improved 500 lb. load capability. The waterproof pin and rotary panel latches can easily be retrofitted on any aircraft, replacing any two-button panel latch. The specially designed rotary handle is only flush when in the stowed position, providing operators with easy visual confirmation that the cargo door is properly secured. These latches are optimum for cargo, avionics, and other access doors on corporate, commercial, and military fixed and rotary wing aircraft. As with all Hartwell designed latches, these waterproof latches are made of corrosion resistant materials and are exceptionally easy to operate.

for more information

For more information on this product and other examples of Solutioneering at work, contact Hartwell Corporation at 1.714.993.4200.

Solutioneering at work

