



ASC ENGINEERING FACT SHEET

... AN ENGINEERING SUCCESS STORY

F-15 Support To Kosovo



DESCRIPTION

The F-15 C/D/E cockpits were not designed for use with NVGs. Many different lights, instruments, and multicolored displays can "bloom" NVGs, potentially blinding an aircrew.

Aircrews have worked around night vision cockpit lighting incompatibility by taping over or turning off offending lights and using "chem" sticks to light darkened cockpit consoles and instruments. This situation

SUMMARY

PROBLEM:

- USAFE F-15 C/D/E aircraft supporting the Kosovo operation were tasked to perform night operations with Night Vision Goggles (NVGs) in cockpits not configured for the Night Vision Imaging System (NVIS). AF/XO issued a Combat Mission Needs Statement (CMNS) in early May 1999.

SOLUTION:

- ASC Engineering formed and led a team composed of specialists from the F-15 System Program Office; the Air Force Research Laboratory, Mesa AZ; the ACC 422 Test and Evaluation Squadron, Nellis AFB, NV; and contractors to address the problem. The ASC Engineering-led team designed, developed, tested, built, and delivered a temporary night vision modification kit for 27 F-15 C/D and 69 F-15E aircraft in seven weeks.

leads to inconsistent cockpit lighting levels (bright spots and dark spots), as well as loss of situational awareness caused by having the lights off. It has been identified by the Air Force as a contributing factor to past aircraft losses.

The CMNS directed the acquisition of a temporary kit to alleviate the safety concerns of operations with NVGs and also instructions regarding the effective use of NVGs during night operations without an NVG-configured cockpit. ASC Engineering personnel led the team answering this warfighter need.

Prototype hardware was comprised of a series of filters for incompatible necessary warning/caution/advisory lights, display filters for color displays, a string of Light Emitting Diode (LED) "Christmas tree" lights and a battery pack. The prototype was evaluated and approved for use by ACC. AFRL-Mesa built 96 kits, which were shipped in theatre on 23 June

1999. The kits can be installed in ten minutes or less into any aircraft engaged in night operations.

ASC/EN's leadership in this extremely accelerated effort significantly alleviated a safety problem and increased the night capability of the F-15C/D/E.

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