Appendix K

Air Force Briefing on Studies of Wiring Problems in KC-135 Aircraft
Covers 1981-85

- 800 autopilot malfunctions.
- 23% of aircraft had faulty wiring.
- Wiring unreliable, fraying, deteriorating, and overheating.
- Wiring shorts cause electrical problems.
- Over 8,000 wiring defects found in a three-year period.
ELECTRICAL WIRING REPLACEMENT
YC-135A/E/O/R

AUTOPilot DATA

SIX MONTH STUDY 1 DEC 81 - 31 MAY 82 800 AUTOPilot MALFUNCTIONS

ONE TIME INSPECTION JAN 83 23 PERCENT OF AIRCRAFT-FAUL

EXAMPLE: UNCOMMENDED ROLL (FULL LEFT AND RIGHT)
PROBLEM DUE TO BROKEN WIRES

STUDY CONCLUSION: WIRING UNRELIABLE
CAUSES HAZARDOUS CONDITIONS
FAILURE DATA

- FY85 PPM 2846 defects
- FY84 PPM 3036 defects
- FY83 PPM 2722 defects

FREQUENCY

- ACE OF WIRING AND HARDWARE - DIRECT RELATION TO PROBLEM AREAS
- Electrical Installation Has Degradation
- Wiring Shorts Cause Electrical Problems
- Fast Experience - Wiring shorts cause electrical problems
- Connectors, ACE - 1056, Part 1 - Coreded

PROBLEMS:
- Wiring is Fraying - Deteriorating - Overheating

Electrical Wiring System

PDM INJECTION

XG-1504/6/18/4

Electrical Wiring Replacement