



Aerospace

Sensing & Controls

1K7707 Pulsed Electric
Chip Detector System



Model 1K7707
Pulsed Electric Chip Detector (Zapper®) System
for the S-76 with Arriel Engines

System Description

Eaton's Tedeco brand products have been issued an STC by the FAA to cover the manufacture and installation of a Zapper® Pulsed Electric Chip Detector System for Sikorsky S-76 helicopters equipped with Turbomeca Arriel engines. The primary components of the system are a two-channel Power Module, a CHIP PULSE switch and a CHIP DETector TEST switch. The system operates in conjunction with

existing aircraft wiring and engine chip detector(s). When ferrous debris bridges a chip detector gap, its corresponding caution indicator on the IIDS or caution/advisory panel illuminates. The pilot then actuates the three-position center-off CHIP PULSE toggle switch to try to "clear" the debris. When the switch is activated, stored energy from the Power Module will pulse away normal non-critical slivers of wear fuzz, but will not

eliminate debris particles which are large enough to be associated with engine failure. If the chip is not pulsed away, the caution indicator will remain on after the switch is released and the CHIP DET circuit breaker is reset. In this case, the pilot will follow normal precautionary procedures.

The Eaton system also includes a chip detector test switch which is used to ensure that the existing chip detector system is

functioning properly - a feature not present in current aircraft configurations. If the system is operational, upon momentary activation of this CHIP DET TEST switch, both caution indicators on the caution/advisory panel or the IIDS will come on, but will go off when the switch is released and both CHIP DET circuit breakers are pulled and reset. This test can be performed at any time at the pilot's discretion.

The STC kit consists of the following components:
 (Pre-cut cables and all required installation hardware are provided.)



ORDERING INFORMATION:

Eaton Part Number **1K7707**
Note: Only one kit per aircraft is required

TEDECO P/N	DESCRIPTION	QTY.
1J7747	Power Module	1
2Z7938-1	Interconnect Cable	1
2Z7938-2	Interconnect Cable	1
MS24659-27E	CHIP PULSE toggle switch	1
MS24524-30	CHIP DET TEST toggle switch	1
20-0121-1B-6	Post Light	1
MS3320-2	Circuit Breaker, 2A	1

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