CFM56-All -- Engine Parts Serial Number Marking/Checksum (95-10-7200-09)
Reference: 94-07-7200-20

Recently we have received several Quality Problem Referrals (QPRs) because Checksum characters had been recorded as part of a serial number. For your information, the following is a reprint of the July 1994 CFM56 Fleet Highlites article:

CFM56-All -- Engine Parts Serial Number Marking/Checksum (94-07-7200-20)

CF6/CFM56 parts are marked for identification with a part number and, in certain cases, a serial number. On rare occasions, incorrect serial number identification can be caused by a marking quality problem (incorrect marking or marking difficult to read) or by improper reading and/or recording of a serial number during engine assembly. This can lead to a forced module or engine disassembly/reassembly for verification when a dual serialization is detected in engine configuration paperwork.

In order to improve engine parts configuration control and traceability, a Checksum algorithm will be introduced to serial number markings. The algorithm adds two characters to the end of the current serial number. This suffix is used only for coding and verifying the accuracy of the serial number. It does not become part of the serial number and does not interfere with parts configuration control and tracking by GE/CFMI or by operators. The new serialization format will consist of the regular eight alphanumeric characters, followed by a dash, and the Checksum alphanumeric character (N) as shown in the following example:

ABC12345-N

The Checksum algorithm detects various types of errors, including all single character errors and adjacent character transposition. However, a low percentage of multiple errors are self-compensating and hence are not detectable. It is expected that this improved method will permit detection of potential serial number errors with a 99.6% confidence factor. Engine hardware with the Checksum marking will begin appearing in Fourth Quarter 1994.

The Checksum "-" (dash) and alphanumeric character following the serial number on the part is not a part of the serial number and is not to be recorded anywhere by the airlines in their serial number tracking system.

All personnel involved in the transfer or recording of part serial numbers of this new Checksum marking should be aware of this message.

GENERAL