

Swanson, Greg

From: Crane, Charlie
Sent: Wednesday, September 18, 2002 12:26 PM
To: Swanson, Greg; Aggarwal, Pravin
Subject: FW: Impact of Making the P&W HPFTP Speed Sensor a Fracture Critical Part

-----Original Message-----

From: Heflin, Johnny
Sent: Wednesday, September 18, 2002 10:07 AM
To: Crane, Charlie
Subject: RE: Impact of Making the P&W HPFTP Speed Sensor a Fracture Critical Part

Given our precedence for handling these sensors outside of the fracture critical list and the large impact of this potential change, I'd like someone from stress to provide a detailed explanation of how this will help the program. Will it increase SSME reliability or safety? What are the impact of being on the list vs not? Does it drive inspections? Life limits?

I need to understand more about this process.

Johnny Heflin
SSME Project Office

-----Original Message-----

From: Crane, Charlie
Sent: Wednesday, September 18, 2002 9:26 AM
To: Heflin, Johnny
Subject: FW: Impact of Making the P&W HPFTP Speed Sensor a Fracture Critical Part

-----Original Message-----

From: Smith, Clyde G. [mailto:clayde.smith@pw.utc.com]
Sent: Tuesday, September 17, 2002 12:46 PM
To: Charlie Crane (E-mail)
Cc: Holton, Anthony W.
Subject: Impact of Making the P&W HPFTP Speed Sensor a Fracture Critical Part

Charlie,
We had a meeting at P&W with Project, Structures, Design, Quality, and Configuration Management this afternoon to define the impacts of making the Single Piece Speed Sensor P/N 4701604 a Fracture Critical Part. The following are the impacts that were identified:

1. Requires a Class 1 Engineering Change - History has shown it can take up to 6 mos. and \$ 10K to process a CL 1 Change.
2. Requires a new Part Number.
3. Requires updates to the following documents for new Part Number:
 - Speed Sensor Part FR
 - Speed Sensor Structural Analysis VCR

- Fracture Control Plan FR
- Inspectability Report FR
- Loose Parts Kit Drawing
- 801 Installation Drawing
- ICD with new Part Number
- QAD
- CIL

4. During the time to accomplish all of this, all of the Single Piece Speed Sensors would have been delivered and a decision would have to be made on how to handle the parts in the field (11 Units) , ie. inspect and re-identify (Cost TBD).

5. This whole effort is a big job and will take a significant amount of \$ and time to accomplish.

6. Another question is how this will affect approval of the Single Piece Housing Speed Sensor VCR FR20715-123 ? Can the MSFC CCB approve the VCR and issue a Directive to designate the Speed Sensor as Fracture Critical, in order to board the other two Speed Sensor VCR's ?

Clyde G. Smith
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