

**DOCKET NO.: SA-515  
EXHIBIT NO. 11I**

**NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.**

**ATTACHMENT 18**

**INTERVIEW STATEMENT  
WITH DELTA'S NDI INSPECTOR**

**(2 PAGES)**

## Interview Summary

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Jose L. Hilerio, NDI inspector, Delta Airlines

Location: Delta Maintenance Hanger Conference Room  
Date: 12-July-1996  
Time: 1300 EDT  
Present: Frank Gattolin, NTSB  
Mario Giordano, FAA  
Evan Byrne, NTSB

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Mr. Hilerio is an inspector at Delta Airlines, Inc. On October 27, 1996 he performed an FPI inspection on front compressor hub that was involved in the accident.

He has conducted FPI inspections for 1.5 years and has a Level III certification. He is also qualified to conduct MPI inspections.

The Delta training program for FPI inspectors is based on ATA 105 minimum standards. It is administered by Lee Clements, a Foreman for NDI inspection at Delta Airlines, Inc. The training program consists of 20 hours of classroom instruction and 480 hours of on-the-job training (OJT) to achieve Level II certification. FPI inspectors at Delta receive recurrent training every 9-12 months. Recurrent training lasts approximately 4 hours and covers basic processes and principles for FPI testing.

He does not recall any details of his specific activities on October 27, 1996. However, on this day he was assigned to FPI all day.

Hilerio normally works the second shift Monday to Friday. He reports taking no vacation time in the weeks before or after the inspection of this part on October 27, 1996.

Hilerio said he refers to the maintenance manual to identify critical inspection areas listed by the manufacturer. He said that he looks everywhere on a part that he is inspecting for a crack and feels good when he finds a crack. For a -219 hub there is no specific guidance provided by the company or the manufacturer on where to start the inspection, each inspector makes their own decision. Hilerio says he frequently detects cracks in parts during FPI inspection. Based on his experience he says aluminum parts show the most frequent cracking while parts made of steel and titanium show the least cracking. Hilerio reported he has never rejected a -219 hub during his 1.5 years as an FPI inspector. Hilerio approaches each part as if a crack was present and it is his job to detect it.

He said that there were no specific procedures on checking for cracks in the boreholes. He said he cannot find cracks in boreholes using FPI and has not found a crack in a borehole.

Hilerio reports FPI testing is monotonous work and requires periodic "stress breaks." The purpose of the breaks is to get light and air according to Hilerio. He says they cannot be too long or the parts will start backing up. He said that if the -219 hub is clean inspection normally takes about 40-60 minutes - longer if there are any indications. He said he uses the overhead white light in the booth to check if the part is clean - then turns it off and begins the inspection of the part.

According to Mr. Hilerio, no performance-based monitoring or incentive programs are in place at Delta. A program of accountability sheets was recently initiated however Mr. Hilerio believes these are for part tracking purposes and not employee monitoring. Mr. Hilerio reports a sense of pressure comes from parts backing up outside the darkroom ready for inspection; however they attempt to regulate the movement of parts through the FPI process to ensure parts are not sent back for cleaning because they

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were not inspected within the 2-hour time period.

Mr. Hilerio reports using other FPI inspectors on-duty for consultation when a suspicious indication is found. He says he feels no pressure when sending a part with a suspicious indication on it for further inspection. According to Hilerio, the potential for a suspicious indication to be false, is a "part of the job."

The light and the surrounding metal on the shroud is hot to the touch. Mr. Hilerio reported that FPI inspectors learn very quickly that the light can cause burns to unprotected skin; and he pointed out burn sites on his right arm.

A small white spotlight is used during the FPI inspection process to highlight areas for further evaluation. Mr. Hilerio reported that the use of the white light in between UV light inspection in a relatively dark work environment did not affect his performance.

Hilerio says he has not used a borescope during FPI inspections. (note team did not observe borescope available in visual inspection area either).

Parts are placed on hard plastic wheels that function as coasters to help move the part along the roller-deck of the FPI line. Many of the parts are heavy and considerable effort is required to pull them from the FPI preparation line to the darkroom. When asked what improvements to this process he would like to see, Hilerio stated the process should be automated allowing ease of part movement into the darkroom. Hilerio said the tent needs to be bigger. He also said that there is only one hoist available on the 2 lines (note: team observed inspectors working with two -219 hubs and neither inspector used a hoist during the inspection). Hilerio said that the dirty base of the inspection table (excess and residue penetrant) that the team saw was like that for about 2 weeks. He said the cleaning crew cleans it daily but it is not cleaned thoroughly. He said that the florescent background can be a big irritation.