ATTACHMENT 3

Requested Testing of NTSB Incident Hub Mount May 22, 1997

Short Term:

Purpose: To determine which elements stabilized alpha in the damaged microstructure.

1) SIMS mapping of O_2, C, Fe, Si, and W

2) Depth measurement of the average O_2 depth.

3) Distribution of Fe in the deformed layer. More extensive mapping to verify distribution.

4) Base composition SIMS spectrum.

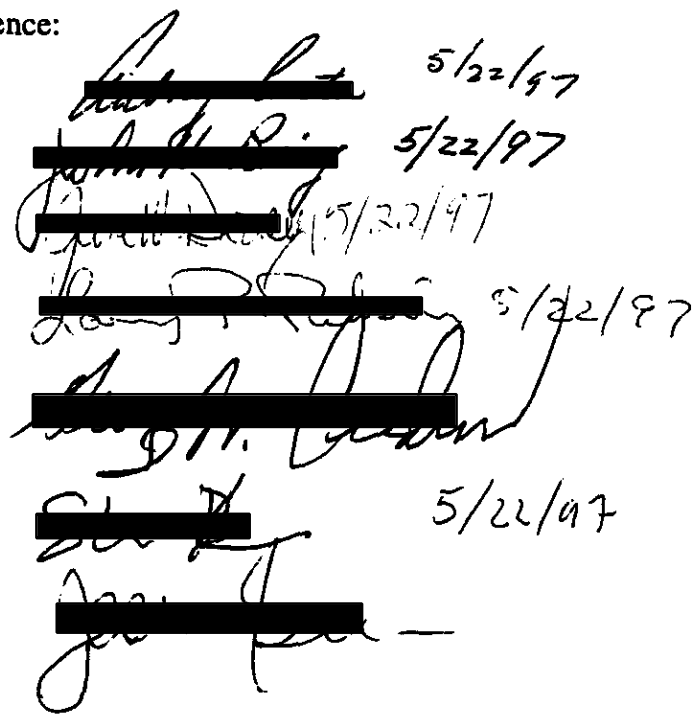
Long Term Testing:.

1) Metallographic examination of the holes on each side of the fractured hole at same location and position as the fracture origin in the accident hub.

2) Possible SIMS examination of adjacent holes (#1).

3) Bulk chemical analysis of elemental composition.

Concurrence:



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Why check alloy chemistry?

a) Establish baseline for sample survey.

b) Verify correct alloy spec. (only ~~visual~~ EDS and hardness so far)

Why examine microstructure further?

a) We need to find out if the stabilized alpha was created by a tool breakage.

Significance:

If alpha was created by tool breakage we don't have changes to existing ESA procedures.

If alpha was not created by tool breakage we have to find the faulty manufacture procedure.

Action: → NTSB - Plan - VOLVO

Obtain tool alloys
Obtain bolt alloy

[redacted] 5/22/97