



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

Office Of Defects Investigation

Memo

To: File
From: Bruce York
CC:
Date: 3/20/05
Re: Ford Expedition/F150 Fire Inspections in Houston and Fort Worth Texas

EA05-005

On the 15th and 16th of March 2005, I traveled to Houston and Fort Worth Texas to inspect a 2000 MY Expedition and a 2001 MY F150 that had each caught fire while parked with it's ignitions off.

On the 15th I inspected the 2000 MY Expedition. Prior to this inspection the owner had contacted the NHTSA and filed a complaint that his vehicle had caught on fire while parked even after he had disconnected his Speed Control Deactivation Switch (SCDS). The owner stated in the complaint that he had seen a news report concerning the recall related to the SCDS on his vehicle and in the report he had seen how to disconnect the switch. The owner stated that he had disconnected the SCDS as he had seen in the news report. Given this background, the decision was made for ODI to inspect the vehicle to determine if the switch was some how still related to the fire. During the inspection of the vehicle and an exemplar vehicle, I noted burn patterns, reviewed physical evidence, and interviewed the owner. Burn patterns found on the power steering reservoir, and the throttle body, and the fact that the brake master cylinder is still in tact, suggest that the fire might have migrated from the passenger side towards the driver's side of the vehicle. Burn patterns on the top of the hood and front fenders might suggest that the fire started just slightly more towards the center of the vehicle than the master cylinder location. In addition to the burn pattern evidence, the electrical connector that connects to the SCDS was found by the owner on the ground under the vehicle after it was moved from the location where it burned. This connector was still mated to the base of the SCDS. I do not know if the owner had mistakenly disconnected the wrong switch, but clearly the evidence indicated that the SCDS electrical connector had not been disconnected. This connector was examined and showed that the terminals inside the switch had either corroded or short circuited resulting in the terminals disintegrating. This type of damage would indicate that the SCDS was having problems prior to the fire. While inspecting the vehicle I was also informed that the engine in the vehicle had been replaced with in the last 13 months and that the exhaust system had also been modified. I was unable to determine if this work in some way contributed to the fire. When comparing the burn patterns on this vehicle to the burn patterns that resulted on "burn" test vehicles where the cause of the fire was known to be the SCDS, this vehicle appears to have much more damage on the passenger side of the engine compartment than the test vehicles. In this fire there is conflicting evidence as to the cause of the fire as follows:

1. The owner claimed he had disconnected the SCDS
2. Physical evidence collected at the fire scene indicates the SCDS was still connected at the time of the fire.

3. Examination of the electrical connector shows that the electrical terminals had either corroded or short circuited prior to the fire.
4. Engine compartment burn patterns observed on the complainant vehicle are inconsistent with burn patterns observed on a test vehicle where an SCDS was known to have caused the fire.

The cause of the fire in the 2000 MY Expedition is undetermined.

On the 16th I inspected the 2001 MY F150. Prior to this inspection, the NHTSA was contacted by the GSA and was informed that the vehicle had had a fire while parked with the ignition off and that the vehicle did not have cruise control. I reviewed photographs of the burn and they looked similar to burn patterns produced by a fire caused by an SCDS. Given this background, the decision was made for ODI to inspect this vehicle to find out what might have caused a fire and produced the burn patterns shown in the photographs. Based on my inspection the cause of the fire was not identified. I do believe however that the hole in the hood did not represent the fire origin but rather the area where the largest fuel load existed. The fuel loads in the area under the burned hole in the hood include the brake fluid reservoir, the power steering fluid reservoir, and the Vapor Control Valve. These fuel loads may in some way be related to the hole that burned in the hood. Based on burn patterns that existed on the vehicle, the fire origin appeared to have been more toward the front and center of the vehicle than in the area of the hole in the hood. The cause of the fire in the 2001 MY F150 is undetermined.