Remote Investigation/Non-contact deployment
Dynamic Science, Inc. / Case Number:DS97029
1996 Ford Aspire
Colorado
December, 1997

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*The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.*

*Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.*

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16. Abstract

This incident occurred in December 1997 at approximately 0600 hours. The case vehicle, an unoccupied 1996 Ford Aspire 2-door hatchback, was parked in an industrial area parking lot. This vehicle was equipped with both driver's side and passenger's side frontal air bags. The vehicle was equipped with air bag sensors at the right front and left front of the vehicle, and a safing sensor in the center of the instrument panel. There was crash-related damage found on the right front fender and on the front bumper. The damage is not related to the fire nor the subsequent air bag deployment.

The vehicle had been stolen. The person reporting the fire saw several males in a vehicle near the involved vehicle. The lights of the vehicle were off. As the reporting party approached, the vehicle sped off with the lights still off. As the vehicle sped away, the case vehicle burst into flames.

A fire was deliberately set in the passenger compartment. It appears that gasoline was used to set the fire. The fire caused the driver's side air bag to deploy. During the deployment, portions of the driver's side air bag module were propelled through the roof, causing a 10-15 cm (4-6 in.) hole in the roof. Portions of the module were found on the ground approximately 30-38 m (100-125 ft) directly behind the vehicle. The interior of the vehicle was badly burned and it is unclear if the passenger's side air bag deployed.

| 17. Key Words | 18. Distribution Statement |
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**Dynamic Science, Inc.**
**Accident Investigation**
**Case Number:DS97029**

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**BACKGROUND:**

Description: This case was initiated in response to a report of a fire-initiated air bag deployment. This case is being conducted as a remote investigation. The NHTSA was notified by a city arson squad. DSI was notified on December 30, 1997.

Investigation Type: Remote

Crash Location: Colorado
Incident Date: December, 1997
Notification Date: December, 1997
Field Work Completed: NA

**SUMMARY:**

This incident occurred in December 1997 at approximately 0600 hours. The case vehicle, an unoccupied 1996 Ford Aspire 2-door hatchback, was parked in an industrial area parking lot. This vehicle was equipped with both driver's side and passenger's side frontal air bags. The vehicle was equipped with air bag sensors at the right front and left front of the vehicle, and a safing sensor in the center of the instrument panel. There was crash-related damage found on the right front fender and on the front bumper. The damage is not related to the fire nor the subsequent air bag deployment.

The vehicle had been stolen. The person reporting the fire saw several males in a vehicle near the involved vehicle. The lights of the vehicle were off. As the reporting party approached, the vehicle sped off with the lights still off. As the vehicle sped away, the case vehicle burst into flames.

**Figure 1**. Exterior, case vehicle

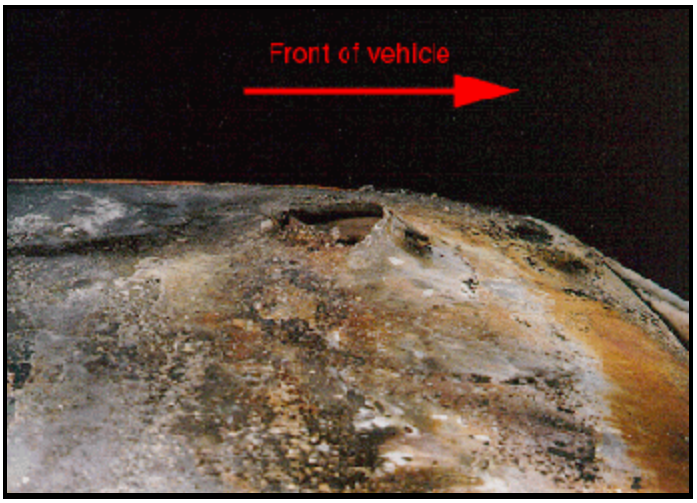


**Figure 2**. Roof exit point.

A fire was deliberately set in the passenger compartment. It appears that gasoline was used to set the fire. The fire caused the driver's side air bag to deploy. During the deployment, portions of the driver's frontal air bag module were propelled through the roof, causing a 10-15 cm (4-6 in.) hole in the roof. Portions of the module were found on the ground approximately 30-38 m (100-125 ft) directly behind the vehicle. The interior of the vehicle was badly burned and it is unclear at this time if the passenger's side air bag deployed.

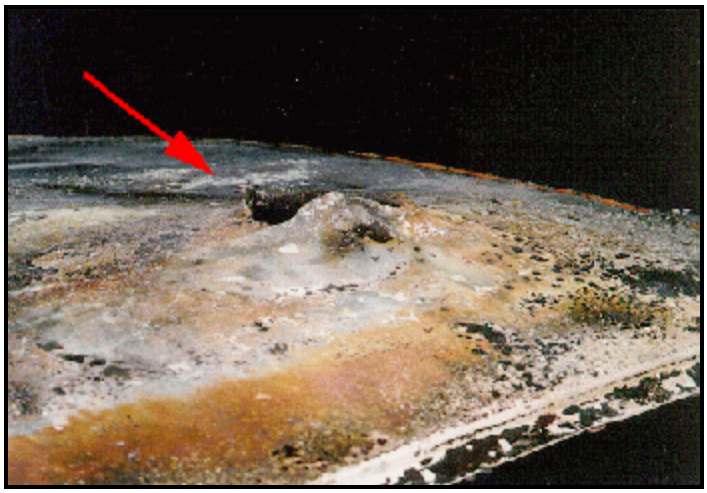

**Figure 3**. Exterior, close up of hole in roof.

**Figure 4**. Close up of exit point.

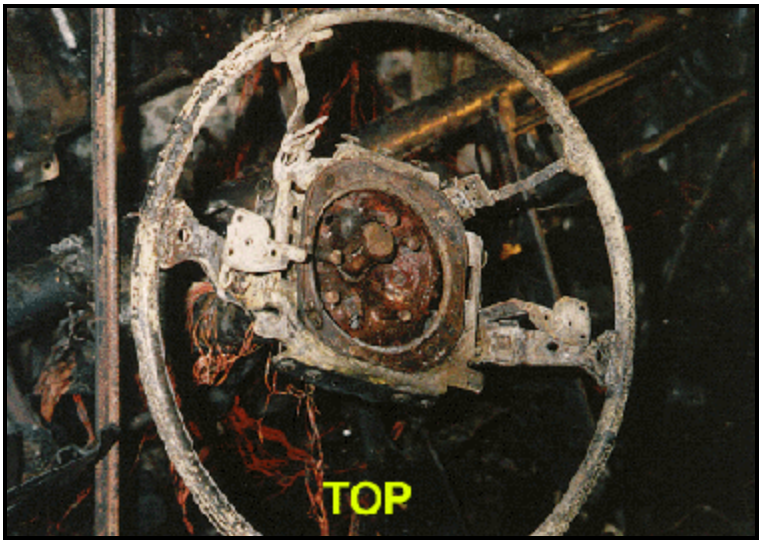


**Figure 5**. Steering wheel

**Figure 6**. Exit point, interior view

## DETAILED INFORMATION

### Vehicles

Case vehicle

| | | |
|---|---|---|
| Description: | 1996 Ford Aspire | |
| VIN: | KNJLT0SA6Txxxxxx | |
| Odometer: | Unknown | |
| Engine: | 1.3 L I4 | |
| Reported Defects: | None | |
| Cargo: | Unknown | |
| Damage Description: | Extensive burn damage, hole in roof, un-related crash damage to right front fender and on the front bumper. | |
| CDC: | NA | |
| Delta V: | Total | NA |
| | Longitudinal | NA |
| | Latitudinal | NA |
| | Energy | NA |