

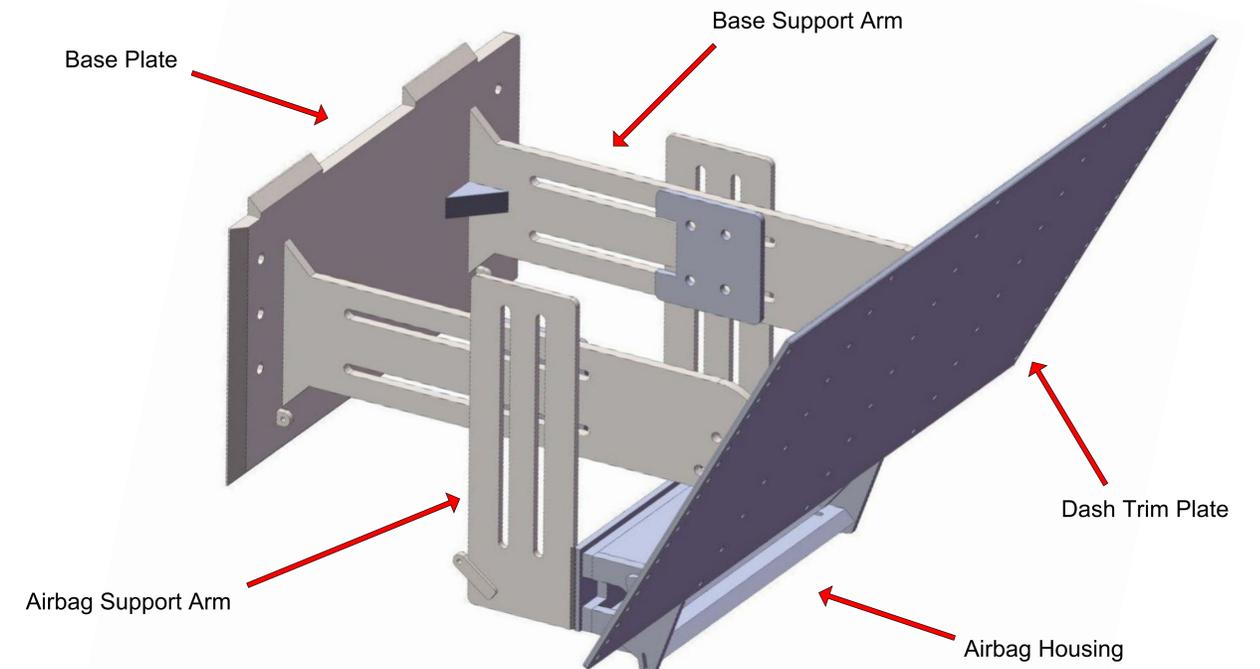
# Adjustable Knee Airbag Deployment Fixture

## Project Description

- Autoliv needed a knee airbag deployment fixture that could adjust the airbag placement, dash trim angle, and dash curvature.
- The airbag deployment fixture dash trim needed to be as big as an inflated knee airbag. The airbag placement, dash angle, and dash curvature all needed to be able to simulate different car design to increase test accuracy.
- Previous versions of the fixture only included dash trim angle adjustment and side-to-side airbag placement adjustment..

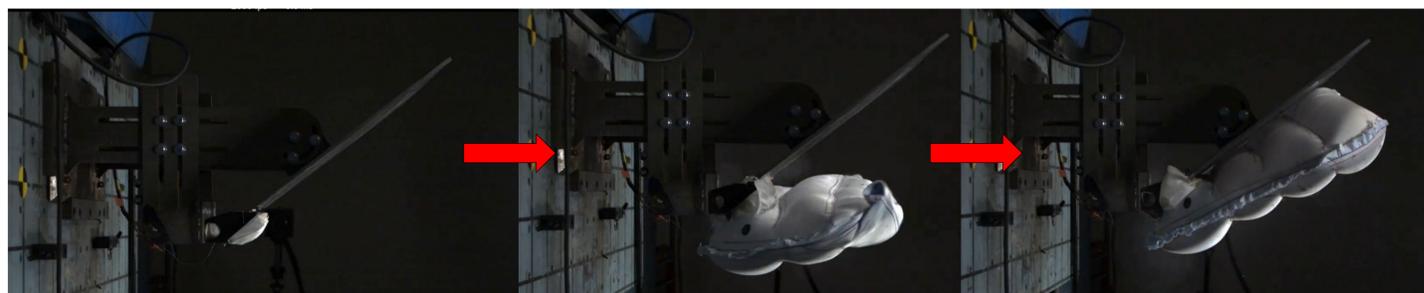


## Design Description



## Performance Review

- The fixture underwent static airbag deployment tests in Autoliv's facility in Ogden.



## Conclusion



- The requirements for all around adjustability given by the client were met. Testing was successfully carried out and showed positive results for the robustness and reliability of the fixture.
- Lessons Learned: We learned to analyze and design a fixture that works for a system that has multiple different forces acting on it in various directions.
- Recommended Future Work: The compartment that the airbag inflates from needs to have an increased thickness to prevent deformation over multiple tests.

