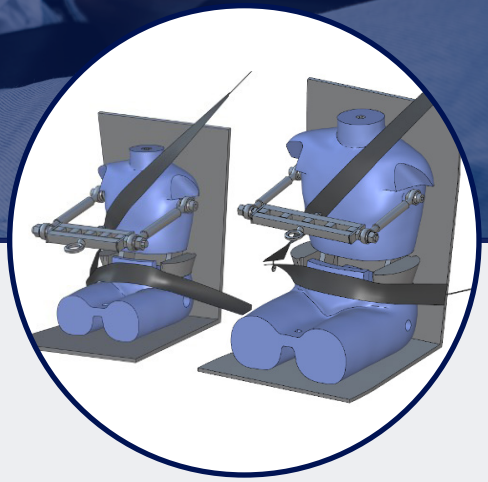
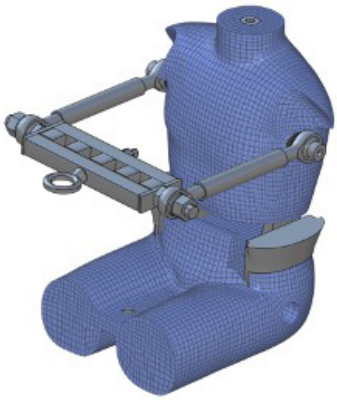
FAD1 & FAD2 DUMMY FE

FORCE APPLICATION DEVICES

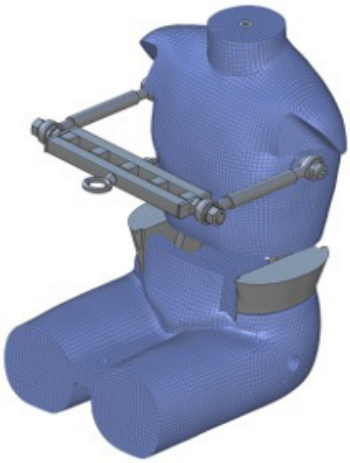


Force Application Device (FAD) was developed to have a more biofidelic body form to load seat belt restraint anchorage systems for both an adult and child size form.

NHTSA released a 2024 update to FMVSS 210 to include the FAD1 and FAD2 (previously called FAD and JFAD) as an alternative option to the SFADs used in seat belt testing. The SFADs were not attached to each other and left ambiguities as to how they should be set up, as well as needing preload to keep them in the correct position. The FAD was created to provide a more biofidelic solution to these issues.



FAD2 Dummy FE



FAD1 Dummy FE

MODEL	NODES	ELEMENTS
FAD1 Dummy FE	155,038	166,930
FAD2 Dummy FE	49,046	56,072

KEY FEATURES

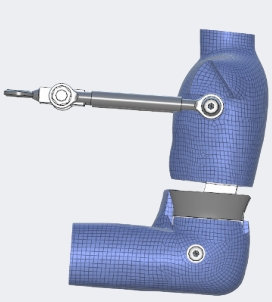
Accurate geometric and mass representation based on CAD data and material specifications

Accurate material representation based on material testing

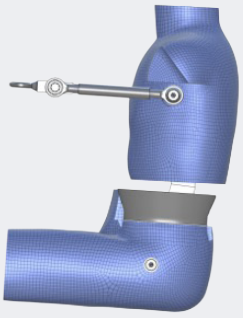
The kinematic chain is defined to articulate the FADs into the required position

Robust simulations to secure stable simulations in the vehicle environment

Friction value recommendation between belt system and FADs



FAD2 Dummy FE



FAD1 Dummy FE