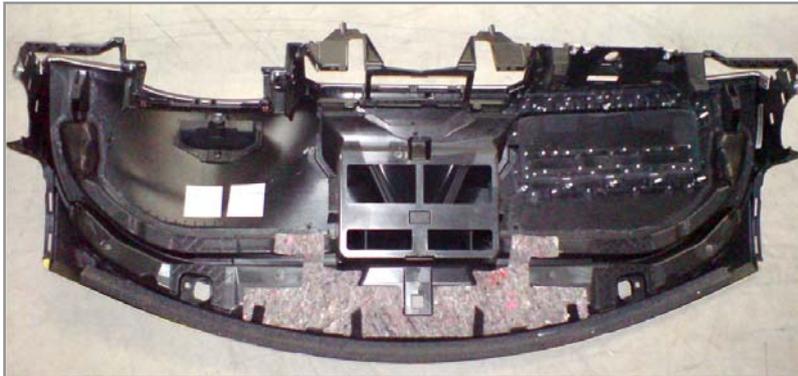


Engineering tear-down study:

Working with OEM contracted as supplier to UK based prestigious motor vehicle manufacturer

Project Objective:

- To reduce the number of fixings used in the assembly of two specific consoles.
- To provide engineered solutions in achieving the objective.
- To reduce costs by fastener specification
- To reduce costs by logistical means
- To improve the quality of the assembly where possible



Current fixings and applications:



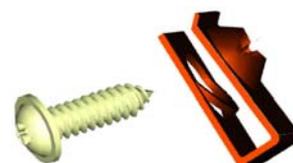
- Push Retainer and Screw

Console A: 4 locations
Console B: 13 locations



- Lug Nut and Screw

Console A: 6 locations
Console B: 6 locations



- Edge Clip and Screw

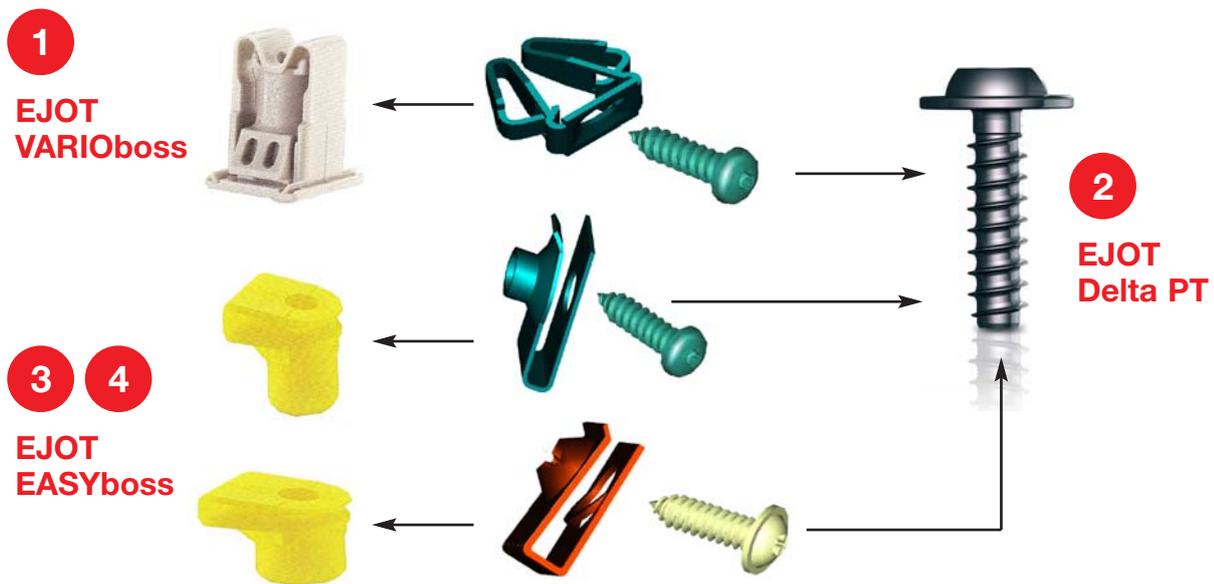
Console A: 12 locations
Console B: 3 locations

Tear down process and post analysis report:

Following the 'tear-down' analysis EJOT UK's Application Engineers identified two fastener rationalisation proposals;

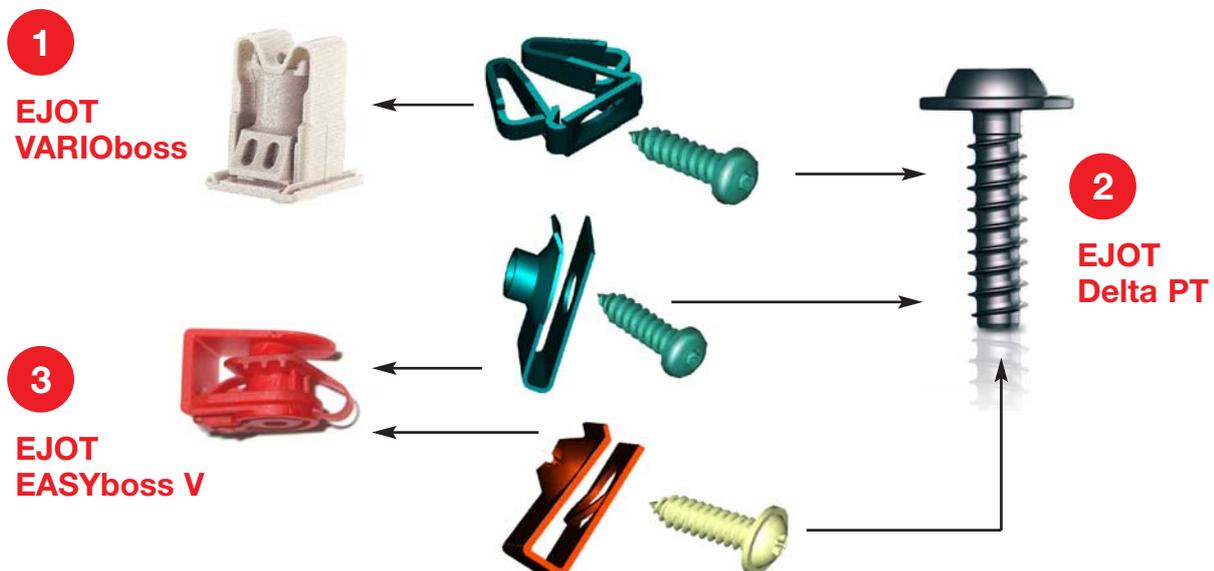
Initial Proposal: Six fixings become four

offers a reduction in fasteners and the introduction of new fasteners giving improvement of assembly and environmental benefits.



Advanced Proposal: Six fixings become three

offers a reduction in fasteners and the introduction of new fasteners giving improvement of assembly and environmental benefits.



Features and Benefits of EJOT products

EJOT EASYboss



- **Parts stay singular**
no interlinking of bosses in box
- **Boss is plastic**
allowing for easy recycling (ELV)
non – rattle
- **Ease of handling**
no sharp edges
easy ‘click-in’ positive positioning
- **Extended Boss**
greater thread engagement
- **Coloured**
allows for easy identification

EJOT VARIOboss



- **Parts stay singular**
no interlinking of bosses in box
- **Boss is plastic**
allowing for easy recycling (ELV)
non – rattle
- **Ease of handling**
no sharp edges
easy ‘click-in’ positive positioning

EJOT VARIOboss V



- **Extended Boss**
greater thread engagement
- **Coloured**
allows for easy identification
- **Grip range**
variable due to sprung lugs

EJOT Delta PT



- **Direct assembly saves production time**
- **Optimized geometry**
- **Process-safe assembly**
- **Long life-time of joint**
- **Repeat assembly is possible**
- **High strength**
- **Minimized stress of screw joint**

Stage 2 Proposal:

EJOT® to undertake a detailed review of the full assembly of both cockpits.

The purpose of this exercise will be to identify any areas where access, either with fastener installation or mating components, has a restriction; side air vents for example.

Following this investigation a third stage detailed fastener rationalisation will be presented.