

Auto makers cut costs and speed production of center consoles with vibration welding technology

BENEFITS

- Dramatic reduction in assembly time
- Elimination of labor, consumables, and risk of noise
- Time-saving “two-welds-in-one” tooling design
- Enhanced driving experience for consumers



APPLICATION

Automotive center console assembly

CHALLENGE

During assembly of center consoles, two side panels are joined to the center storage container which usually has a hinged cover and often houses utility ports (USB, 12V power) and sometimes rear vent ducts.

Original consoles were assembled using fasteners or adhesives. With repeated use, though, the fasteners tended to work loose and produce unacceptable BSR (Buzz, Squeak, Rattle) conditions. And while adhesive joining minimized the potential for BSR, both methods required manual labor and consumables, which added cost and assembly time. Furthermore, neither method could produce a hermetic seal needed for incorporating rear vent ducts into the consoles.

An alternative assembly method was needed to improve the consumer experience and address the cost and assembly complications of existing methods.

SOLUTION

By turning to Branson technology available from Emerson, automotive manufacturers were able to reduce labor costs, assembly time, and eliminate consumables from their processes.

Branson delivered above and beyond the customer’s expectations by using Branson M-9 Series large-part vibration welders and special tooling that made it possible to assemble both the right and left side panels to the center storage molded structure simultaneously. In effect, the unique tooling design allowed the manufacturer to make “two welds in one.” The rigid, single-piece assembly that resulted from vibration welding also easily passed the BSR specifications that provided the enhanced, quiet driving experience for consumers.

Two welds in one

Branson vibration welding technology and tooling expertise provide dramatic time, cost, and space savings to automotive center console assembly.

In addition, the hermetic seal produced by vibration welding allowed rear vent ducts to be integrated into the design of both the center structure and the outer panels of the console.

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