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CHRYSLER LX DASH SILENCER



AUTOMOTIVE SOLUTIONS

# CHRYSLER LX DASH SILENCER

Automotive Acoustics System

## CHALLENGE

Chrysler called Cascade Engineering to work on a program to replace the dash silencer in the Magnum and 300C vehicle series. The new design had to reduce the number of dash acoustics part numbers, decrease weight, optimize mass distribution and maintain a highly competitive unit price.

## SOLUTION

Cascade Engineering developed a one-part design that replaced the existing three-part system. Six living hinges were incorporated into the design to allow for more vehicle sheet metal coverage, better fit, and improved acoustic performance while reducing molding costs. Creative use of air insulation further reduced foam content. Integrated hush panel guides reduced assembly time. Variable wall stock was used to focus mass where it was needed to improve acoustics. A new, ultra low density absorber material provided additional acoustic performance. A number of Cascade Engineering patented features enhanced overall design — foam retainers to eliminate the use of adhesives, patented return wall seals to restrict noise paths, and a patented integral wire feature that eliminated the need for additional components.

## RESULTS

The project met its goals and a change in materials is expected to further reduce weight and cost.

- Nearly \$3 in unit price reduction
- Reduced number and complexity of foam pads
- Reduced operator content compared to similar jobs
- Integrated patented features — absorber retention, wire management, and direct acoustics — to simplify assembly and enhance performance
- Ultra lightweight absorber material to enhance acoustic performance

For additional information about this project or other Cascade Engineering case histories, visit our web site at [cascadeng.com](http://cascadeng.com) or call 800.968.2278.

