

2013
ASBE Student
Drafting Projects

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Front Grill

Purpose : the grill opening has multiple purposes .

- It fills the opening in the front of the vehicle
- It allows air to pass through to cool the powertrain
- It projects the “Brand Image” of the vehicle

Design :

- Most grills on today's vehicles are one piece designs
They can be made from stamped or cast metal, but most are injection molded plastic
- Most grills include the brand logo. On premium vehicles, additional grill features have included light bezels, cameras and even moving shutters to improve aero performance
- Attachment schemes (to the body) can include mechanical (bolts, screws , clips) , adhesive tape or a combination of mechanical & adhesive. The best designs have no visible attachments
- Because the grill is highly visible, the fit (gap & flush) to the mounted & adjacent panels is critical. The surface appearance (whether painted or chrome plated) has to be flawless.
- Given its position on the front of the vehicle, it has to be “robustly” made to stand up to the rigors of weather , temperature and dynamic exposure.

Manufacturing

- Whether stamped, cast, or injection molded the shape has to be such that it does ^{not} create a “die lock” condition
- Because post finishing (paint or plating) is required, consideration for holding / fixturing the part on a non class “A” surface should be included.



Body Appliques / Emblems

Purpose :

- Identifies the vehicle (manufacturer / model)
- It projects the “Brand Image” of the vehicle

Design :

- Most appliques on today's vehicles are one piece designs. They can be made from stamped or cast metal, but most are injection molded plastic.
- All appliques include the brand logo and / or model name.
- Attachment schemes (to the body) can include mechanical (screws or clips), adhesive tape or a combination of mechanical & adhesive. The best designs have no visible attachments.
- Because the applique is highly visible, the fit (gap & flush) to the mounted & adjacent panels is critical. The surface appearance (whether painted or plated) has to be flawless.
- Given its position on the outside of the vehicle, it has to be “robustly” made to stand up to the rigors of weather , temperature and dynamic exposure.

Manufacturing

- Whether stamped, cast, or injection molded the shape has to be such that it does not create a “die lock” condition.
- Because post finishing (paint or plating) is required, consideration for holding / fixturing the part on a non class “A” surface should be included.



