

# AIR DUCTS

## SUCCESSFUL DESIGN & ENGINEERING TECHNIQUES

**4** AREAS  
OEMs  
WANT  
↓  
REDUCED



Part Failure



Fuel Consumption

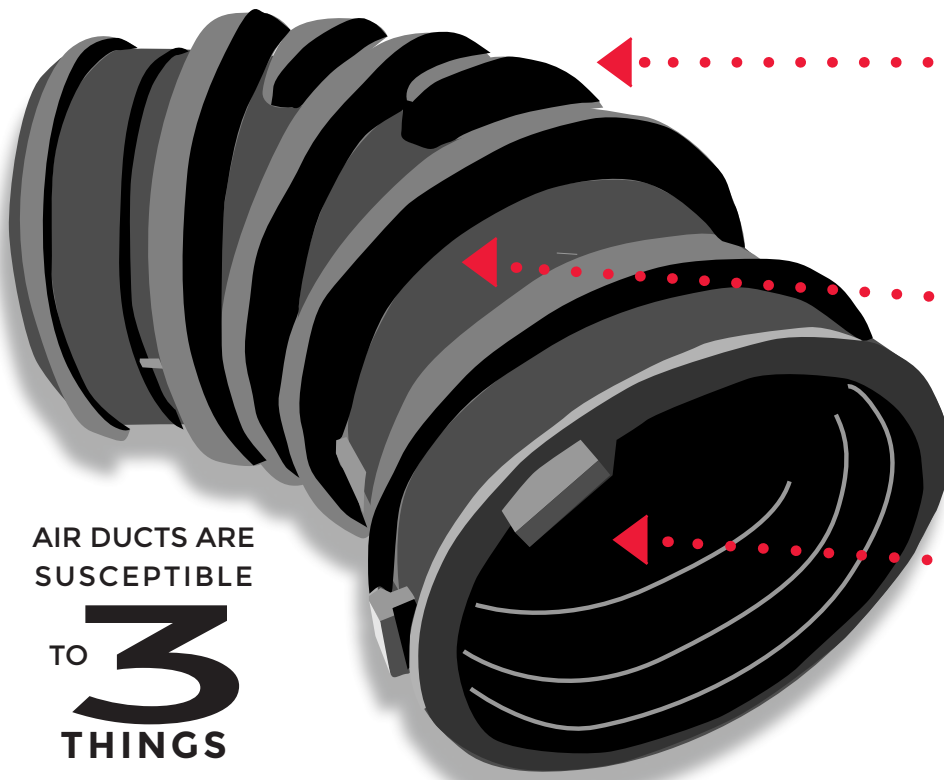


Weight



Costs

### What improves performance?



AIR DUCTS ARE  
SUSCEPTIBLE  
TO **3**  
THINGS

**Collapse:**

Duct design incorporating strategically placed “ribbing” makes it more resistant to vacuum suction. This design technique uses less material which saves money. It also ensures air transfer is efficient for the best fuel mileage.

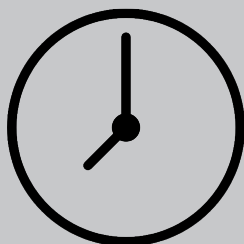
**Eruption:**

Use of high-modulus material compounds give ducts strength during turbine-driven, high-pressure applications. Duct walls can be made thinner, using less material, thereby reducing the part’s weight for maximum benefit.

**Heat:**

Material selection depends upon the application, and air ducts face a variety of environmental issues. Heat and oil resistant compounds, like DuPont™ Vamac®, are highly durable. Knowing the right compound to use ensures the best performance.

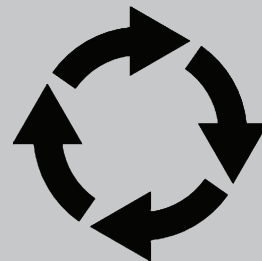
### Signs of Innovative Engineering



**Efficient Production Process**

Innovative air duct design simplifies purchasing, reduces production time and reduces costs.

A part’s design can incorporate several parts molded together as one, or add molded-in features which attach to hardware to assist with assembly or installation.



**Continuous Process Improvement**

Quality testing supports the safety and durability needs of the industry, and innovations that move design forward.

Design can also streamline production, as molding techniques reduce waste and drive better performance from a quality manufactured part.

