

# « JUST THE FACTS »

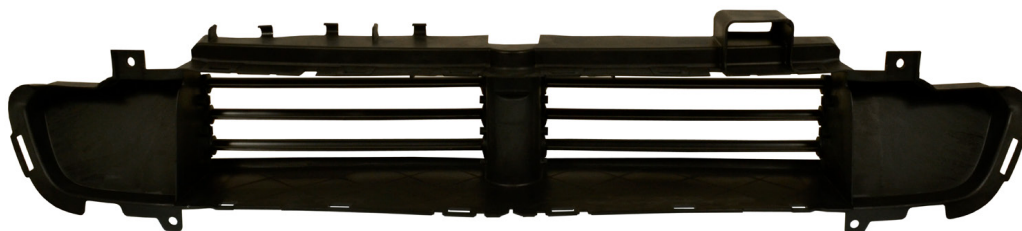
## Active Grille Shutters

### The Active Aerodynamics Market Has Arrived

Active aerodynamics is one of the latest automotive technologies designed to improve fuel efficiency. One of the most promising technologies in active aerodynamics is the Active Grille Shutter (also known as Radiator Shutter Assemblies). It regulates frontal airflow in the vehicle to reduce aerodynamic drag. They also offer improved fuel mileage to help address rising fuel economy standards and the need to reduce vehicle emissions. In order to supply technicians with the quality program they need to enter this growing category, Standard® is proud to introduce a line of Active Grille Shutters.



Industry Experts expect the active aerodynamics market opportunity to reach \$1.1 billion by 2023.



#### AGS1005

Jeep Cherokee (2014-17)  
4 Cyl 2.4L & 6 Cyl 3.2L Engines

### What does an Active Grille Shutter do?

Active Grille Shutters open and close automatically to control airflow, reducing aerodynamic drag and improve fuel efficiency.

### How does an Active Grille Shutter work?

Open shutters allow air to flow through the radiator and into the engine compartment to promote cooling. When cooling air is not needed, the shutters close, rerouting air around the vehicle to reduce aerodynamic drag and fuel consumption. When fully closed, the reduction in drag can reduce CO2 emissions by close to 2%. An additional benefit of the Active Grille Shutter system is that it keeps the vanes closed as long as possible during a cold start, so the engine reaches its most efficient operating temperature quicker with reduced warm up time.

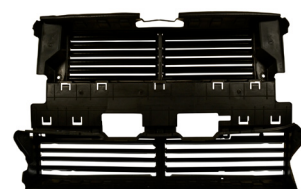
### What are the common causes of failure?

Common causes of failure include both mechanical and calibration errors and the product's vulnerability to front-end collisions. Additionally, an obstruction can cause the shutters to bind together and cause the grille shutter system's dedicated fuse to blow.



#### AGS1000

Ford F-150 2016-18 (upper)



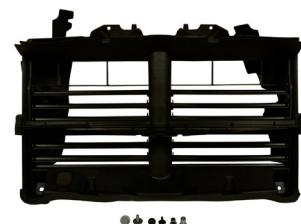
#### AGS1001

Ford Fusion 2013-16



#### AGS1002

Ford F-150 2015-17 (lower)



#### AGS1003

Ram 1500 2013-2017



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