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# Quiet Bleed Valve For Gas Turbine Engine

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## BRIEF DESCRIPTION

The present invention relates noise reduction for gas turbine engines. Significant noise comes from high-pressure and intermediate-pressure bleed valves that relieve pressure from the compressor. The proposed solution reduces noise through innovative designs of the valve muffler and the valve support structure.

## SUGGESTED USES

The proposed design would be used on bleed valves in gas turbine engines. These valves are found on practically every turbofan engine that propels commercial aircraft. Existing aircraft include all Boeing, Airbus, and Embraer jetliners now in commercial fleets globally. Future aircraft include the Boeing 787 (Rolls Royce Trent 1000) and the Airbus A350. The design changes required are relatively modest, so implementation could be achieved quickly upon adoption of this innovative design.

## ADVANTAGES

Reduced engine noise through innovative, lightweight and simple design elements.

## PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,175,577	11/03/2015	2011-645

## STATE OF DEVELOPMENT

Prototypes have been assembled and successfully tested.

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## INVENTORS

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## OTHER INFORMATION

## KEYWORDS

Bleed valve, Gas turbine engine

## CATEGORIZED AS

- » Engineering
  - » Engineering
- » Transportation
  - » Aerospace

## RELATED CASES

2011-645-0

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