

- 6 An aircraft, powered by a jet engine, is flying at a constant speed of 800 m s^{-1} . 20 kg of exhaust gas is ejected from the engine every second, with a velocity of 100 m s^{-1} in the opposite direction relative to the aircraft.

What is the magnitude of the resistive force experienced by the aircraft?

- A $2\,000 \text{ N}$
- B $14\,000 \text{ N}$
- C $16\,000 \text{ N}$
- D $18\,000 \text{ N}$