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function range = range(aircraft,LtoD,v)
% RANGE Computes the range when flying at a constant altitude.
% Inputs are:
% aircraft :a struct aircraft data in SI
% LtoD      :a numeric array of 1xN lift to drag ratio
% v         :a numeric array of 1xN cruise speed in m/s
%
% Output is:
% range     :a numeric array of 1xN range in m

arguments
    aircraft {mustBeA(aircraft,"struct")}
    LtoD (1,:) {mustBeNumeric, mustBeReal}
    v (1,:) {mustBeNumeric, mustBeReal}
end

TSFC = aircraft.TSFC;
Wwet = aircraft.W;
Wdry = aircraft.W-aircraft.W_fuel;

range = (v./TSFC).*LtoD.*log(Wwet./Wdry);
end
```