16 A charged oil droplet of mass m is falling, initially freely, in a vacuum between two horizontal metal plates that are separated by a distance x.

A potential difference (p.d.) V is then applied across the plates. This results in the oil droplet continuing to accelerate downwards but with a reduced acceleration a.

The polarity of the applied p.d. is then reversed so that the direction of the electric force on the droplet is reversed. This results in the downwards acceleration of the oil droplet increasing to $7a$.

What is the magnitude of the charge on the oil droplet?

A $\frac{max}{V}$

B $\frac{3max}{V}$

C $\frac{6max}{V}$

D $\frac{7max}{V}$