Secular Limit of Micromotion

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The non-dimensionalised potential for two ions in a linear Paul trap is given by:

$$V_P = \frac{\eta}{\sqrt{(x_1 - x_2)^2 + (z_1 - z_2)^2}} + \frac{1}{2}\frac{1}{4}[a_z(z_1^2 + z_2^2) + \left(a_x - 2q_x \cos\left(\frac{4\pi\tau}{\beta}\right)\right)(x_1^2 + x_2^2)] \tag{1}$$

If the time-dependence of the potential is neglected (secular limit), we can set $q_x = 0$. **Question for Joe:** Is the secular limit taken just by setting the time-dependent component of the potential to 0? ie. The effective harmonic potential created is the static component of the oscillating potential?