$$-\frac{\partial H}{\partial \mathbf{x}_a} = \dot{\mathbf{p}}_a = e_a \sum_{b\neq a} \frac{e_b \hat{\mathbf{n}}_{ab}}{R_{ab}^2} \left[1 - \left(\frac{1}{2m_a m_b c^2}\right)(\mathbf{p}_a \cdot \mathbf{p}_b)\right] - e_a \sum_{b\neq a} \frac{3e_b \hat{\mathbf{n}}_{ab}}{2m_a m_b c^2 R_{ab}^2} (\mathbf{p}_a \cdot \hat{\mathbf{n}}_{ab})(\mathbf{p}_b \cdot \hat{\mathbf{n}}_{ab}) +$$
$$e_a \sum_{b\neq a} \frac{e_b}{2m_a m_b c^2 R_{ab}^2} [\mathbf{p}_a (\mathbf{p}_b \cdot \hat{\mathbf{n}}_{ab}) + \mathbf{p}_b (\mathbf{p}_a \cdot \hat{\mathbf{n}}_{ab})] + \left(\frac{e_a}{m_a c^2}\right) \frac{(\mathbf{p}_a \times \mathbf{m})}{x_a^3} - \left(\frac{3e_a}{m_a c^2}\right) [\mathbf{p}_a \cdot (\mathbf{m} \times \mathbf{x}_a)] \frac{\mathbf{x}_a}{x_a^5}$$