$$x_c(t) = \xi_\chi(\tau_1) + \left((12\mu \; \square \sigma^{-1})(\tau - \tau_1) - (1\mu \; \square \sigma^{-3})(\tau - \tau_1)^3 \right)\Big|_{\tau_1}^{\tau}; \; 1\sigma < \tau < \zeta$$