The standard gluon-to-gluon splitting function at LO reads:

$$P_{gg}(x) = 4C_A\left[\frac{1}{(1-x)_+} + \frac{1}{x} - 2 + x - x^2\right] + \frac{11C_A - 4N_f T_R}{3}\delta(1-x) \tag{1}$$

where we have used our definition of the expantion parameter $\alpha_s/4\pi$. Using the SMEFT approach the same splitting function gets an additional contribution:

$$P_{gg}(x) \to P_{gg}(x) + \Delta P_{gg}(x,\mu)\,, \tag{2}$$

where:

$$\Delta P_{gg}(x,\mu) = -\frac{4C_A}{g_s(\mu)}\left[\frac{1}{(1-x)_+} + \frac{1}{x} - 2 + \delta(1-x)\right]\frac{C_G}{\Lambda^2}\mu^2\,. \tag{3}$$

In eq. (3) the ratio C_G/Λ^2 is a fixed parameter while $g_s(\mu) = \sqrt{4\pi\alpha_s(\mu)}$. In addition, the factor μ^2 that appears in eq. (3) can be related to α_s by inverting the function $\alpha_s(\mu)$ such that $\mu^2 \equiv \mu^2(\alpha_s)$. Finally, we can write:

$$\Delta P_{gg}(x,\mu) = -\frac{\mu^2(\alpha_s)}{\sqrt{4\pi\alpha_s}}4C_A\left[\frac{1}{(1-x)_+} + \frac{1}{x} - 2 + \delta(1-x)\right]\underbrace{\frac{C_G}{\Lambda^2}}_{K_{\mathrm{EFT}}}\,, \tag{4}$$

so that:

$$\frac{\alpha_s}{4\pi}P_{gg}(x,\mu) \to \frac{\alpha_s}{4\pi}P_{gg}(x,\mu) - \sqrt{\frac{\alpha_s}{4\pi}}\frac{\mu^2(\alpha_s)}{4\pi}4C_A\left[\frac{1}{(1-x)_+} + \frac{1}{x} - 2 + \delta(1-x)\right]K_{\mathrm{EFT}} \tag{5}$$