

Lagrangian density	
$-\frac{1}{2}a_0\Gamma^{\alpha\beta\chi}\Gamma_{\beta\chi\alpha}+\frac{1}{2}a_0\Gamma^{\alpha\beta}\Gamma^{\chi}_{\beta\chi}+h^{\alpha\beta}\mathcal{T}_{\alpha\beta}+\Gamma^{\alpha\beta\chi}\Delta_{\alpha\beta\chi}-\frac{1}{2}a_0\Gamma^{\alpha\beta\chi}\partial_{\beta}h_{\alpha\chi}-$	
$\frac{1}{4}a_0\Gamma^{\alpha\beta}\partial_{\beta}h^{\chi}_{\chi}+\frac{1}{4}a_0\Gamma^{\alpha\beta}_{\alpha}\partial_{\beta}h^{\chi}_{\chi}-\frac{1}{4}a_0h^{\chi}_{\chi}\partial_{\beta}\Gamma^{\alpha}_{\alpha}\beta+\frac{1}{4}a_0h^{\chi}_{\chi}\partial_{\beta}\Gamma^{\alpha\beta}_{\alpha}-$	
$\frac{1}{2}a_0h_{\alpha\chi}\partial_{\beta}\Gamma^{\alpha\beta\chi}+\frac{11}{2}a_1\partial^{\alpha}\Gamma^{\chi\delta}_{\delta}\partial_{\beta}\Gamma^{\beta}_{\chi\alpha}+\frac{1}{2}a_1\partial^{\alpha}\Gamma^{\beta}_{\chi\alpha}\partial_{\beta}\Gamma^{\chi\delta}_{\delta}-$	
$19a_1\partial^{\alpha}\Gamma^{\chi\delta}_{\chi}\partial_{\beta}\Gamma^{\beta}_{\delta\alpha}+\frac{1}{4}a_0h^{\alpha\beta}\partial_{\beta}\partial_{\alpha}h^{\chi}_{\chi}-\frac{1}{8}a_0\partial_{\beta}h^{\chi}_{\chi}\partial^{\beta}h^{\alpha}_{\alpha}+$	
$\frac{1}{2}a_0\Gamma^{\alpha\beta}\partial_{\chi}h^{\chi}_{\beta}+\frac{1}{4}a_0\partial^{\beta}h^{\alpha}_{\alpha}\partial_{\chi}h^{\chi}_{\beta}+\frac{37}{4}a_1\partial_{\beta}\partial_{\alpha}h^{\delta}_{\delta}\partial_{\chi}\Gamma^{\alpha\beta\chi}+$	
$\frac{3}{4}a_1\partial_{\beta}\Gamma^{\alpha\beta\chi}\partial_{\chi}\partial_{\alpha}h^{\delta}_{\delta}-\frac{1}{2}a_0h^{\alpha\beta}\partial_{\chi}\partial_{\beta}h^{\chi}_{\alpha}+\frac{1}{4}a_0h^{\alpha}_{\alpha}\partial_{\chi}\partial_{\beta}h^{\beta\chi}+$	
$\frac{1}{4}a_0h^{\alpha\beta}\partial_{\chi}\partial^{\chi}h_{\alpha\beta}-\frac{1}{4}a_0h^{\alpha}_{\alpha}\partial_{\chi}\partial^{\chi}h^{\beta}_{\beta}-\frac{1}{4}a_0\partial_{\beta}h_{\alpha\chi}\partial^{\chi}h^{\alpha\beta}+\frac{1}{8}a_0\partial_{\chi}h_{\alpha\beta}\partial^{\chi}h^{\alpha\beta}+$	
$\frac{1}{2}a_0h_{\beta\chi}\partial^{\chi}\Gamma^{\alpha}_{\alpha}\beta-\frac{1}{2}a_1\partial_{\beta}\Gamma^{\alpha}_{\chi}\partial^{\chi}\Gamma^{\alpha}_{\alpha}\beta-\frac{1}{2}a_1\partial_{\beta}\Gamma^{\delta}_{\delta\chi}\partial^{\chi}\Gamma^{\alpha}_{\alpha}\beta+$	
$\frac{1}{2}a_1\partial_{\chi}\Gamma^{\delta}_{\beta\delta}\partial^{\chi}\Gamma^{\alpha}_{\alpha}\beta-\frac{1}{2}a_1\partial_{\chi}\Gamma^{\delta}_{\beta\delta}\partial^{\chi}\Gamma^{\alpha}_{\alpha}\beta-\frac{1}{2}a_1\partial_{\chi}\Gamma^{\delta}_{\delta\beta}\partial^{\chi}\Gamma^{\alpha}_{\alpha}\beta-$	
$\frac{3}{4}a_1\partial_{\chi}\partial_{\beta}h^{\delta}_{\delta}\partial^{\chi}\Gamma^{\alpha}_{\alpha}\beta-\frac{11}{2}a_1\partial_{\beta}\Gamma^{\delta}_{\chi}\partial^{\chi}\Gamma^{\alpha\beta}_{\alpha}+\frac{19}{2}a_1\partial_{\beta}\Gamma^{\delta}_{\chi\delta}\partial^{\chi}\Gamma^{\alpha\beta}_{\alpha}+$	
$\frac{11}{2}a_1\partial_{\chi}\Gamma^{\delta}_{\beta\delta}\partial^{\chi}\Gamma^{\alpha\beta}_{\alpha}-\frac{1}{2}a_1\partial_{\chi}\Gamma^{\delta}_{\beta\delta}\partial^{\chi}\Gamma^{\alpha\beta}_{\alpha}-\frac{37}{4}a_1\partial_{\chi}\partial_{\beta}h^{\delta}_{\delta}\partial^{\chi}\Gamma^{\alpha\beta}_{\alpha}+$	
$a_1\partial_{\alpha}\Gamma^{\delta}_{\chi\delta}\partial^{\chi}\Gamma^{\alpha\beta}_{\beta}-a_1\partial_{\chi}\Gamma^{\delta}_{\alpha\delta}\partial^{\chi}\Gamma^{\alpha\beta}_{\beta}-\frac{9}{2}a_1\partial_{\chi}\partial_{\beta}h^{\delta}_{\delta}\partial^{\chi}\partial_{\alpha}h^{\alpha\beta}+$	
$\frac{17}{8}a_1\partial_{\chi}\partial_{\beta}h^{\delta}_{\delta}\partial^{\chi}\partial^{\beta}h^{\alpha}_{\alpha}-\frac{1}{2}a_1\partial_{\chi}\Gamma^{\alpha\beta\chi}\partial_{\delta}\Gamma^{\delta}_{\alpha\beta}-\frac{1}{2}a_1\partial_{\beta}\Gamma^{\alpha\beta\chi}\partial_{\delta}\Gamma^{\delta}_{\alpha\chi}-$	
$\frac{1}{2}a_1\partial_{\beta}\Gamma^{\alpha\beta\chi}\partial_{\delta}\Gamma^{\delta}_{\alpha\chi}+\frac{19}{2}a_1\partial_{\chi}\Gamma^{\alpha\beta\chi}\partial_{\delta}\Gamma^{\delta}_{\beta\alpha}+\frac{1}{2}a_1\partial^{\chi}\Gamma^{\alpha}_{\alpha}\beta\partial_{\delta}\Gamma^{\delta}_{\beta\chi}+$	
$\frac{1}{2}a_1\partial^{\chi}\Gamma^{\alpha}_{\chi\beta}\partial_{\delta}\Gamma^{\delta}_{\chi\beta}+\frac{1}{2}a_1\partial^{\chi}\Gamma^{\alpha\beta}_{\alpha}\partial_{\delta}\Gamma^{\delta}_{\chi\beta}-\frac{1}{2}a_1\partial_{\beta}\Gamma^{\alpha\beta\chi}\partial_{\delta}\Gamma^{\delta}_{\chi\alpha}+$	
$\frac{1}{2}a_1\partial^{\chi}\Gamma^{\beta}_{\beta\alpha}\partial_{\delta}\Gamma^{\delta\alpha}_{\chi}+a_1\partial^{\chi}\Gamma^{\beta}_{\alpha}\partial_{\delta}\Gamma^{\delta}_{\chi\beta}-\frac{1}{2}a_1\partial_{\beta}\Gamma^{\alpha}_{\alpha}\beta\partial_{\delta}\Gamma^{\chi}_{\chi}+\frac{1}{2}$	
$a_1\partial_{\beta}\Gamma^{\alpha}_{\alpha}\beta\partial_{\delta}\Gamma^{\chi\delta}_{\chi}-\frac{1}{2}a_1\partial_{\beta}\Gamma^{\alpha\beta}_{\alpha}\partial_{\delta}\Gamma^{\chi\delta}_{\chi}-\frac{37}{4}a_1\partial_{\chi}\Gamma^{\alpha\beta\chi}\partial_{\delta}\partial_{\alpha}h^{\delta}_{\beta}-$	
$\frac{3}{4}a_1\partial_{\beta}\Gamma^{\alpha\beta\chi}\partial_{\delta}\partial_{\alpha}h^{\delta}_{\chi}-\frac{37}{4}a_1\partial_{\chi}\Gamma^{\alpha\beta\chi}\partial_{\delta}\partial_{\beta}h^{\delta}_{\alpha}+\frac{3}{8}a_1\partial_{\chi}\partial^{\chi}h^{\alpha\beta}\partial_{\delta}\partial_{\beta}h^{\delta}_{\alpha}+$	
$\frac{37}{8}a_1\partial_{\alpha}\partial^{\chi}h^{\alpha\beta}\partial_{\delta}\partial_{\beta}h^{\delta}_{\chi}+\frac{3}{4}a_1\partial^{\chi}\Gamma^{\alpha}_{\beta}\partial_{\delta}\partial_{\beta}h^{\delta}_{\chi}+\frac{37}{4}a_1\partial^{\chi}\Gamma^{\alpha\beta}_{\alpha}\partial_{\delta}\partial_{\beta}h^{\delta}_{\chi}-$	
$\frac{3}{8}a_1\partial^{\chi}\partial_{\alpha}h^{\alpha\beta}\partial_{\delta}\partial_{\beta}h^{\delta}_{\chi}+\frac{13}{4}a_1\partial^{\chi}\partial^{\beta}h^{\alpha}_{\alpha}\partial_{\delta}\partial_{\beta}h^{\delta}_{\chi}-\frac{3}{4}a_1\partial_{\beta}\Gamma^{\alpha\beta\chi}\partial_{\delta}\partial_{\chi}h^{\delta}_{\alpha}-$	
$\frac{43}{8}a_1\partial_{\alpha}\partial^{\chi}h^{\alpha\beta}\partial_{\delta}\partial_{\chi}h^{\delta}_{\beta}+\frac{3}{4}a_1\partial^{\chi}\Gamma^{\alpha}_{\beta}\partial_{\delta}\partial_{\chi}h^{\delta}_{\beta}+\frac{37}{4}a_1\partial^{\chi}\Gamma^{\alpha\beta}_{\alpha}\partial_{\delta}\partial_{\chi}h^{\delta}_{\beta}+$	
$\frac{77}{8}a_1\partial^{\chi}\partial_{\alpha}h^{\alpha\beta}\partial_{\delta}\partial_{\chi}h^{\delta}_{\beta}-\frac{29}{4}a_1\partial^{\chi}\partial^{\beta}h^{\alpha}_{\alpha}\partial_{\delta}\partial_{\chi}h^{\delta}_{\beta}+a_1\partial_{\beta}\Gamma^{\alpha}_{\alpha}\beta\partial_{\delta}\partial_{\chi}h^{\chi\delta}-$	
$a_1\partial_{\beta}\Gamma^{\alpha\beta}_{\alpha}\partial_{\delta}\partial_{\chi}h^{\chi\delta}-\frac{1}{2}a_1\partial_{\beta}\partial_{\alpha}h^{\alpha\beta}\partial_{\delta}\partial_{\chi}h^{\chi\delta}+a_1\partial_{\beta}\partial^{\beta}h^{\alpha}_{\alpha}\partial_{\delta}\partial_{\chi}h^{\chi\delta}+$	
$\frac{37}{4}a_1\partial_{\chi}\Gamma^{\alpha\beta\chi}\partial_{\delta}\partial^{\delta}h_{\alpha\beta}+\frac{17}{8}a_1\partial_{\chi}\partial^{\chi}h^{\alpha\beta}\partial_{\delta}\partial^{\delta}h_{\alpha\beta}+\frac{3}{4}a_1\partial_{\beta}\Gamma^{\alpha\beta\chi}\partial_{\delta}\partial^{\delta}h_{\alpha\chi}+$	
$\frac{1}{4}a_1\partial_{\alpha}\partial^{\chi}h^{\alpha\beta}\partial_{\delta}\partial^{\delta}h_{\beta\chi}-\frac{3}{4}a_1\partial^{\chi}\Gamma^{\alpha}_{\alpha}\beta\partial_{\delta}\partial^{\delta}h_{\beta\chi}-\frac{37}{4}a_1\partial^{\chi}\Gamma^{\alpha\beta}_{\alpha}\partial_{\delta}\partial^{\delta}h_{\beta\chi}-$	
$\frac{73}{8}a_1\partial^{\chi}\partial_{\alpha}h^{\alpha\beta}\partial_{\delta}\partial^{\delta}h_{\beta\chi}+\frac{17}{4}a_1\partial^{\chi}\partial^{\beta}h^{\alpha}_{\alpha}\partial_{\delta}\partial^{\delta}h_{\beta\chi}-a_1\partial_{\beta}\Gamma^{\alpha}_{\alpha}\beta\partial_{\delta}\partial^{\delta}h^{\chi}_{\chi}+$	
$a_1\partial_{\beta}\Gamma^{\alpha\beta}_{\alpha}\partial_{\delta}\partial^{\delta}h^{\chi}_{\chi}-\frac{1}{2}a_1\partial_{\beta}\partial^{\beta}h^{\alpha}_{\alpha}\partial_{\delta}\partial^{\delta}h^{\chi}_{\chi}+\frac{1}{2}a_1\partial_{\alpha}\Gamma^{\beta\chi\delta}\partial^{\delta}\Gamma^{\alpha\beta\chi}+$	
$a_1\partial_{\alpha}\Gamma^{\beta\chi\delta}\partial^{\delta}\Gamma^{\alpha\beta\chi}+a_1\partial_{\alpha}\Gamma^{\chi\beta\delta}\partial^{\delta}\Gamma^{\alpha\beta\chi}+\frac{1}{2}a_1\partial_{\alpha}\Gamma^{\chi\beta\delta}\partial^{\delta}\Gamma^{\alpha\beta\chi}+$	
$a_1\partial_{\alpha}\Gamma^{\delta\chi\beta}\partial^{\delta}\Gamma^{\alpha\beta\chi}+a_1\partial_{\alpha}\Gamma^{\delta\chi\beta}\partial^{\delta}\Gamma^{\alpha\beta\chi}-\frac{1}{2}a_1\partial_{\beta}\Gamma^{\alpha\chi\delta}\partial_{\alpha\delta}\Gamma^{\delta}\Gamma^{\alpha\beta\chi}-\frac{1}{2}a_1\partial_{\beta}\Gamma^{\alpha\chi\delta}\partial_{\alpha\delta}\Gamma^{\delta}\Gamma^{\alpha\beta\chi}-$	
$\frac{1}{2}a_1\partial_{\beta}\Gamma^{\chi\delta\alpha}\partial^{\delta}\Gamma^{\alpha\beta\chi}-\frac{3}{2}a_1\partial_{\beta}\partial_{\alpha}h^{\chi\delta}\partial^{\delta}\Gamma^{\alpha\beta\chi}-\frac{1}{2}a_1\partial_{\chi}\Gamma^{\alpha\beta\delta}\partial^{\delta}\Gamma^{\alpha\beta\chi}-$	
$\frac{1}{2}a_1\partial_{\chi}\Gamma^{\beta\alpha\delta}\partial^{\delta}\Gamma^{\alpha\beta\chi}+a_1\partial_{\chi}\Gamma^{\beta\alpha\delta}\partial^{\delta}\Gamma^{\alpha\beta\chi}+\frac{3}{2}a_1\partial_{\chi}\partial_{\alpha}h^{\beta\delta}\partial^{\delta}\Gamma^{\alpha\beta\chi}-$	
$a_1\partial_{\delta}\Gamma^{\alpha\beta\chi}\partial^{\delta}\Gamma^{\alpha\beta\chi}-a_1\partial_{\delta}\Gamma^{\alpha\chi\beta}\partial^{\delta}\Gamma^{\alpha\beta\chi}-\frac{1}{2}a_1\partial_{\delta}\Gamma^{\beta\alpha\chi}\partial^{\delta}\Gamma^{\alpha\beta\chi}-\frac{1}{2}a_1\partial_{\delta}\Gamma^{\beta\chi\alpha}\partial^{\delta}\Gamma^{\alpha\beta\chi}-$	
$\frac{1}{2}a_1\partial_{\delta}\Gamma^{\chi\beta\alpha}\partial^{\delta}\Gamma^{\alpha\beta\chi}+\frac{3}{2}a_1\partial_{\delta}\partial_{\beta}h^{\chi\alpha}\partial^{\delta}\Gamma^{\alpha\beta\chi}-\frac{3}{2}a_1\partial_{\delta}\partial_{\chi}h^{\beta\delta}\partial^{\delta}\Gamma^{\alpha\beta\chi}-$	
$\frac{11}{2}a_1\partial_{\beta}\Gamma^{\delta\alpha}_{\alpha}\beta\partial^{\delta}\Gamma^{\alpha\chi}_{\chi}-\frac{1}{2}a_1\partial^{\alpha}\Gamma^{\beta}_{\delta\alpha}\partial^{\beta}\partial^{\delta}\Gamma^{\chi}_{\beta\chi}+\frac{1}{2}a_1\partial_{\beta}\Gamma^{\delta\alpha}_{\alpha}\beta\partial^{\delta}\Gamma^{\chi}_{\alpha\chi}-$	
$\frac{3}{4}a_1\partial_{\beta}\partial_{\alpha}h^{\chi\delta}\partial^{\delta}\partial^{\chi}h^{\alpha\beta}+\frac{3}{2}a_1\partial_{\chi}\partial_{\beta}h^{\alpha\delta}\partial^{\delta}\partial^{\chi}h^{\alpha\beta}-\frac{3}{4}a_1\partial_{\delta}\partial_{\chi}h^{\alpha\beta}\partial^{\delta}\partial^{\chi}h^{\alpha\beta}$	

$\Delta^{\#1}_{1^+}+\alpha\beta$	$\Delta^{\#2}_{1^+}+\alpha\beta$	$\Delta^{\#3}_{1^+}+\alpha\beta$	$\Delta^{\#1}_{1^-}\alpha$	$\Delta^{\#2}_{1^-}\alpha$	$\Delta^{\#3}_{1^-}\alpha$	$\Delta^{\#4}_{1^-}\alpha$	$\Delta^{\#5}_{1^-}\alpha$	$\Delta^{\#6}_{1^-}\alpha$	$\mathcal{T}^{\#1}_{1^-}\alpha$
$\Delta^{\#1}_{1^+}+\alpha\beta$	0	0	0	0	0	0	0	0	0
$\Delta^{\#2}_{1^+}+\alpha\beta$	$-\frac{2\sqrt{2}}{a_0}$	$\frac{40\sqrt{2}a_1k^2}{2(a_0^2-14a_0a_1k^2-35a_1^2k^4)}-\frac{a_0}{a_0^2-29a_0a_1k^2}$	0	0	0	0	0	0	0
$\Delta^{\#3}_{1^+}+\alpha\beta$	0	$\frac{4}{a_0-29a_1k^2}$	0	0	0	0	0	0	0
$\Delta^{\#1}_{1^-}+\alpha$	0	0	0	$\frac{2\sqrt{2}}{a_0}$	0	0	0	0	0
$\Delta^{\#2}_{1^-}+\alpha$	0	0	0	$\frac{2\sqrt{2}}{a_0}$	0	$\frac{5\sqrt{\frac{10}{3}}a_1k^2}{a_0^2-33a_0a_1k^2}+\frac{401a_1^2k^4}{a_0^2(a_0-33a_1k^2)}$	$\frac{10a_1k^2(-11a_0+118a_1k^2)}{\sqrt{3}a_0^2(a_0-33a_1k^2)}-\frac{a_0^2-23a_0a_1k^2}{12a_0^2(a_0-33a_1k^2)}$	$\frac{50\sqrt{\frac{2}{3}}a_1k^2}{a_0^2-33a_0a_1k^2}-\frac{a_0-28a_1k^2}{6a_0^2-198a_0a_1k^2}$	0
$\Delta^{\#3}_{1^-}+\alpha$	0	0	0	0	0	$\frac{5\sqrt{\frac{2}{3}}a_1k^2(7a_0-236a_1k^2)}{a_0^2(a_0-33a_1k^2)}$	$-\frac{\sqrt{5}(5a_0-164a_1k^2)}{12a_0^2(a_0-33a_1k^2)}$	$-\frac{\sqrt{\frac{5}{2}}a_0^2(a_0-33a_1k^2)}{6a_0^2(a_0-33a_1k^2)}$	0
$\Delta^{\#4}_{1^-}+\alpha$	0	0	0	0	0	$-\frac{5\sqrt{\frac{10}{3}}a_1k^2}{a_0^2-33a_0a_1k^2}$	$-\frac{\sqrt{5}(5a_0-164a_1k^2)}{12a_0(a_0-33a_1k^2)}$	$-\frac{\sqrt{5}}{6a_0(a_0-33a_1k^2)}$	0
$\Delta^{\#5}_{1^-}+\alpha$	0	0	0	0	0	$\frac{10a_1k^2(-11a_0+118a_1k^2)}{\sqrt{3}a_0^2(a_0-33a_1k^2)}$	$-\frac{\sqrt{\frac{5}{2}}a_0^2(a_0-33a_1k^2)}{6\sqrt{2}a_0^2(a_0-33a_1k^2)}$	$-\frac{7(a_0+2a_1k^2)}{3\sqrt{2}a_0(a_0-33a_1k^2)}$	0
$\Delta^{\#6}_{1^-}+\alpha$	0	0	0	0	0	$\frac{50\sqrt{\frac{2}{3}}a_1k^2}{a_0^2-33a_0a_1k^2}$	$-\frac{a_0-28a_1k^2}{6a_0^2-198a_0a_1k^2}$	$-\frac{5}{3(a_0-33a_1k^2)}$	0
$\mathcal{T}^{\#1}_{1^-}+\alpha$	0	0	0	0	0	0	0	0	0

$\Gamma^{\#1}_{1^+}+\alpha\beta$	$\Gamma^{\#1}_{1^+}+\alpha\beta$	$\Gamma^{\#2}_{1^+}+\alpha\beta$	$\Gamma^{\#3}_{1^+}+\alpha\beta$	$\Gamma^{\#1}_{1^-}\alpha$	$\Gamma^{\#2}_{1^-}\alpha$	$\Gamma^{\#3}_{1^-}\alpha$	$\Gamma^{\#4}_{1^-}\alpha$	$\Gamma^{\#5}_{1^-}\alpha$	$\mathcal{H}^{\#1}_{1^-}\alpha$
$\Gamma^{\#1}_{1^+}+\alpha\beta$	$\frac{1}{4}(-a_0-15a_1k^2)-\frac{a_0}{2\sqrt{2}}$	$-\frac{a_0}{2\sqrt{2}}$	$5a_1k^2$	0	0	0	0	0	0
$\Gamma^{\#2}_{1^+}+\alpha\beta$	0	0	0	0	0	0	0	0	0
$\Gamma^{\#3}_{1^+}+\alpha\beta$	$5a_1k^2$	0	$\frac{1}{4}(-a_0-29a_1k^2)$	0	0	0	0	0	0
$\Gamma^{\#1}_{1^-}+\alpha$	0	0	0	$\frac{1}{4}(-a_0-3a_1k^2)-\frac{a_0}{2\sqrt{2}}$	$\frac{5}{2}\sqrt{3}a_1k^2$	$-\frac{5}{2}\sqrt{\frac{2}{3}}a_1k^2$	$5\sqrt{\frac{2}{2}}a_1k^2$	$-\frac{5a_1k^2}{\sqrt{3}}$	0
$\Gamma^{\#2}_{1^-}+\alpha$	0	0	0	$\frac{a_0}{2\sqrt{2}}$	0	0	0	0	0
$\Gamma^{\#3}_{1^-}+\alpha$	0	0	0	$\frac{5}{2}\sqrt{3}a_1k^2$	0	$-\frac{a_0}{3}$	$-\frac{a_0}{6\sqrt{2}}$	$\frac{1}{6}(-a_0+20a_1k^2)$	0
$\Gamma^{\#4}_{1^-}+\alpha$	$-\frac{10a_1k^2}{\sqrt{3}}$	$-\frac{a_0}{2\sqrt{2}}$	0	$-\frac{5}{2}\sqrt{\frac{2}{3}}a_1k^2$	0	$\frac{1}{3}(a_0+7a_1k^2)$	$-\frac{1}{6}\sqrt{\frac{2}{2}}(a_0+16a_1k^2)-\frac{1}{6}\sqrt{\frac{2}{2}}a_1k^2$	$-\frac{1}{6}\sqrt{5}(a_0-5a_1k^2)$	0
$\Gamma^{\#5}_{1^-}+\alpha$	0	0	0	$5\sqrt{\frac{3}{2}}a_1k^2$	0	$-\frac{a_0}{6\sqrt{2}}$	$\frac{a_0}{3}$	$\frac{a_0+40a_1k^2}{6\sqrt{2}}$	0
$\Gamma^{\#6}_{1^-}+\alpha$	0	0	0	$-\frac{5a_1k^2}{\sqrt{3}}$	0	$-\frac{1}{6}\sqrt{5}(a_0-5a_1k^2)$	$\frac{a_0+40a_1k^2}{6\sqrt{2}}$	$-\frac{5}{12}(a_0-17a_1k^2)$	0
$\mathcal{H}^{\#1}_{1^-}+\alpha$	0	0	0	0	0	0	0	0	0

$$\Gamma^{\#1}_{3^+}+\alpha\beta\chi\boxed{\frac{1}{2}(-a_0-7a_1k^2)}$$

$$\Delta^{\#1}_{3^+}+\alpha\beta\chi\boxed{-\frac{2}{a_0+7a_1k^2}}$$

$\Gamma^{\#1}_{0^+}+\dagger$	$\Gamma^{\#1}_{0^+}+\dagger$	$\Gamma^{\#2}_{0^+}+\dagger$	$\Gamma^{\#3}_{0^+}+\dagger$	$\Gamma^{\#4}_{0^+}+\dagger$	$\mathcal{H}^{\#1}_{0^+}+\dagger$	$\mathcal{H}^{\#2}_{0^+}+\dagger$	$\Gamma^{\#1}_{0^+}+\dagger$
$\Gamma^{\#1}_{0^+}+\dagger$	$\frac{1}{2}(-a_0+25a_1k^2)$	0	$10\sqrt{\frac{2}{3}}a_1k^2$	$-\frac{10a_1k^2}{\sqrt{3}}$	$-\frac{25a_1k^3}{2\sqrt{2}}$	0	0
$\Gamma^{\#2}_{0^+}+\dagger$	0	0	$\frac{a_0}{2}$	$-\frac{a_0}{2\sqrt{2}}$	0	0	0
$\Gamma^{\#3}_{0^+}+\dagger$	$10\sqrt{\frac{2}{3}}a_1k^2$	$\frac{a_0}{2}$	$\frac{23a_1k^2}{3}$	$-\frac{3a_0+46a_1k^2}{6\sqrt{2}}$	$-\frac{10ia_1k^3}{\sqrt{3}}$	0	0
$\Gamma^{\#4}_{0^+}+\dagger$	$-\frac{10a_1k^2}{\sqrt{3}}$	$-\frac{a_0}{2\sqrt{2}}$	$-\frac{3a_0+46a_1k^2}{6\sqrt{2}}$	$\frac{1}{6}(3a_0+23a_1k^2)$	$5i\sqrt{\frac{2}{3}}a_1k^3$	0	0
$\mathcal{H}^{\#1}_{0^+}+\dagger$	$\frac{25ia_1k^3}{2\sqrt{2}}$	0	$\frac{10ia_1k^3}{\sqrt{3}}$	$-5i\sqrt{\frac{2}{3}}a_1k^3$	$\frac{1}{4}k^2(a_0+25a_1k^2)$	0	0
$\mathcal{H}^{\#2}_{0^+}+\dagger$	0	0	0	0	0	0	0
$\Gamma^{\#1}_{0^+}+\dagger$	0	0	0	0	0	0	$\frac{1}{2}(-a_0+a_1k^2)$

$\Gamma^{\#1}_{2^+}+\alpha\beta$	$\Gamma^{\#2}_{2^+}+\alpha\beta$	$\Gamma^{\#3}_{2^+}+\alpha\beta$	$\mathcal{H}^{\#1}_{2^+}+\alpha\beta$	$\Gamma^{\#1}_{2^-}+\alpha\beta\chi$	$\Gamma^{\#2}_{2^-}+\alpha\beta\chi$
$\Gamma^{\#1}_{2^+}+\alpha\beta$	$\frac{1}{4}(a_0+11a_1k^2)$	$-5\sqrt{\frac{2}{3}}a_1k^2$	$\frac{5a_1k^2}{\sqrt{3}}$	0	0
$\Gamma^{\#2}_{2^+}+\alpha\beta$	$-5\sqrt{\frac{2}{3}}a_1k^2$	$\frac{1}{6}(-3a_0+a_1k^2)$	$-\frac{a_1k^2}{6\sqrt{2}}$	0	0
$\Gamma^{\#3}_{2^+}+\alpha\beta$	$\frac{5a_1k^2}{\sqrt{3}}$	$-\frac{a_1k^2}{6\sqrt{2}}$	$\frac{1}{12}(3a_0+a_1k^2)$	0	0
$\mathcal{H}^{\#1}_{2^+}+\alpha\beta$	$\frac{11ia_1k^3}{4\sqrt{2}}$	$-\frac{5ia_1k^3}{\sqrt{3}}$	$-\frac{1}{8}k^2(a_0-11a_1k^2)$	0	0
$\Gamma^{\#1}_{2^-}+\alpha\beta\chi$	0	0	0	$\frac{1}{4}(a_0-a_1k^2)$	0
$\Gamma^{\#2}_{2^-}+\alpha\beta\chi$	0	0	0	0	$\frac{1}{4}(a_0-5a_1k^2)$

Source constraints	
SO(3) irreps	#
$\mathcal{T}^{\#2}_{0^+}=0$	1
$\Delta^{\#3}_{0^+}+2\Delta^{\#4}_{0^+}+3\Delta^{\#2}_{0^+}=0$	1
$\mathcal{T}^{\#1\alpha}=0$	3
$2\Delta^{\#6\alpha}_{1^-}+\Delta^{\#4\alpha}_{1^-}+2\Delta^{\#5\alpha}_{1^-}+\Delta^{\#3\alpha}_{1^-}=0$	3
Total #:	8

$\Delta^{\#1}_{2^+}+\alpha\beta$	$\Delta^{\#2}_{2^+}+\alpha\beta$	$\Delta^{\#3}_{2^+}+\alpha\beta$	$\mathcal{T}^{\#1}_{2^+}+\alpha\beta$	$\Delta^{\#1}_{2^-}+\alpha\beta\chi$	$\Delta^{\#2}_{2^-}+\alpha\beta\chi$
$\Delta^{\#1}_{2^+}+\alpha\beta$	$\frac{4(a_0-11a_1k^2)}{a_0^2}-\frac{40\sqrt{\frac{2}{3}}a_1k^2}{a_0^2}$	$-\frac{80a_1k^2}{\sqrt{3}a_0^2}$	$-\frac{44i\sqrt{2}a_1k}{a_0^2}$	0	0
$\Delta^{\#2}_{2^+}+\alpha\beta$	$40\sqrt{\frac{2}{3}}\frac{a_1k^2}{a_0^2}-\frac{2(3a_0+a_1k^2)}{3a_0^2}$	$-\frac{2\sqrt{2}a_1k^2}{3a_0^2}$	$-\frac{80ia_1k}{\sqrt{3}a_0^2}$	0	0
$\Delta^{\#3}_{2^+}+\alpha\beta$	$-\frac{80a_1k^2}{\sqrt{3}a_0^2}$	$\frac{4(3a_0+a_1k^2)}{3a_0^2}$	$-\frac{80i\sqrt{\frac{2}{3}}a_1k}{a_0^2}$	0	0
$\mathcal{T}^{\#1}_{2^+}+\alpha\beta$	$\frac{44i\sqrt{2}a_1k}{a_0^2}$	$\frac{80i\sqrt{\frac{2}{3}}a_1k}{\sqrt{3}a_0^2}$	$-\frac{8(a_0+11a_1k^2)}{a_0^2k^2}$	0	0
$\Delta^{\#1}_{2^-}+\alpha\beta\chi$	0	0	0	$-\frac{4}{a_0a_1k^2}$	0
$\Delta^{\#2}_{2^-}+\alpha\beta\chi$	0	0	0	0	$\frac{4}{a_0-5a_1k^2}$

$\Delta^{\#1}_{0^+}$	$\Delta^{\#2}_{0^+}$	$\Delta^{\#3}_{0^+}$	$\Delta^{\#4}_{0^+}$	$\mathcal{T}^{\#1}_{0^+}$	$\mathcal{T}^{\#2}_{0^+}$	$\Delta^{\#1}_{0^+}$
$-\frac{2(a_0+25a_1k^2)}{a_0^2}$	$\frac{10\sqrt{6}a_1k^2}{a_0^2}$	$-\frac{10\sqrt{\frac{2}{3}}a_1k^2}{a_0^2}$	$-\frac{20a_1k^2}{\sqrt{3}a_0^2}$	$-\frac{50i\sqrt{2}a_1k}{a_0^2}$	0	0
$\frac{10\sqrt{6}a_1k^2}{a_0^2}$	$\frac{3(a_0+23a_1k^2)}{4a_0^2}$	$\frac{5a_0+23a_1k^2}{4a_0^2}$	$\frac{a_0-23a_1k^2}{2\sqrt{2}a_0^2}$	$\frac{20i\sqrt{3}a_1k}{a_0^2}$	0	0
$\frac{10\sqrt{\frac{2}{3}}a_1k^2}{a_0^2}$	$-\frac{9a_0+23a_1k^2}{12a_0^2}$	$-\frac{9a_0+23a_1k^2}{12a_0^2}$	$-\frac{3a_0+23a_1k^2}{6\sqrt{2}a_0^2}$	$-\frac{20ia_1k}{\sqrt{3}a_0^2}$	0	0
$-\frac{20a_1k^2}{\sqrt{3}a_0^2}$	$-\frac{a_0-23a_1k^2}{2\sqrt{2}a_0^2}$	$-\frac{3a_0+23a_1k^2}{6\sqrt{2}a_0^2}$	$\frac{3a_0-23a_1k^2}{6a_0^2}$	$\frac{20i\sqrt{\frac{2}{3}}a_1k}{a_0^2}$	0	0
$\frac{50i\sqrt{2}a_1k}{a_0^2}$	$-\frac{20i\sqrt{3}a_1k}{a_0^2}$	$\frac{20ia_1k}{\sqrt{3}a_0^2}$	$\frac{20i\sqrt{\frac{2}{3}}a_1k}{a_0^2}$	$\frac{4(a_0-25a_1k^2)}{a_0^2k^2}$	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	$-\frac{2}{a_0-a_1k^2}$