	$\omega_{2^+}^{\#1}{}_{\alpha\beta}$	$f_{2^+}^{\#1}{}_{\alpha\beta}$	$\omega_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\omega_{2^+}^{\#1\,\dagger}{}^{\alpha\beta}$	$-\frac{\alpha_0}{4}+\beta_1$	$\frac{i\,(\alpha_0-4\,\beta_1)\,k}{2\,\sqrt{2}}$	0
$f_{2^+}^{\#1\,\dagger}{}^{\alpha\beta}$	$-\frac{i\,(\alpha_0-4\,\beta_1)\,k}{2\,\sqrt{2}}$	$2\,\beta_1\,k^2$	0
$\omega_{2^-}^{\#1\,\dagger}{}^{\alpha\beta\chi}$	0	0	$-\frac{\alpha_0}{4}+\beta_1$

	$\sigma_{2^+}^{\#1}{}_{\alpha\beta}$	$\tau_{2^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\sigma_{2^+}^{\#1\,\dagger}{}^{\alpha\beta}$	$-\frac{16\,\beta_1}{{\alpha_0}^2-4\,\alpha_0\,\beta_1}$	$\frac{2\,i\,\sqrt{2}}{\alpha_0\,k}$	0
$\tau_{2^+}^{\#1\,\dagger}{}^{\alpha\beta}$	$-\frac{2\,i\,\sqrt{2}}{\alpha_0\,k}$	$\frac{2}{\alpha_0\,k^2}$	0
$\sigma_{2^-}^{\#1\,\dagger}{}^{\alpha\beta\chi}$	0	0	$\frac{1}{-\frac{\alpha_0}{4}+\beta_1}$

	$\sigma_{0^+}^{\#1}$	$\tau_{0^+}^{\#1}$	$\tau_{0^+}^{\#2}$	$\sigma_{0^-}^{\#1}$
$\sigma_{0^+}^{\#1\,\dagger}$	$\frac{8\,\beta_1}{{\alpha_0}^2-4\,\alpha_0\,\beta_1+8\,\alpha_6\,\beta_1\,k^2}$	$-\frac{i\,\sqrt{2}\,(\alpha_0-4\,\beta_1)}{\alpha_0\,(\alpha_0-4\,\beta_1)\,k+8\,\alpha_6\,\beta_1\,k^3}$	0	0
$\tau_{0^+}^{\#1\,\dagger}$	$\frac{i\,\sqrt{2}\,(\alpha_0-4\,\beta_1)}{\alpha_0\,(\alpha_0-4\,\beta_1)\,k+8\,\alpha_6\,\beta_1\,k^3}$	$-\frac{\alpha_0-4\,\beta_1+2\,\alpha_6\,k^2}{k^2\,({\alpha_0}^2-4\,\alpha_0\,\beta_1+8\,\alpha_6\,\beta_1\,k^2)}$	0	0
$\tau_{0^+}^{\#2\,\dagger}$	0	0	0	0
$\sigma_{0^-}^{\#1\,\dagger}$	0	0	0	$\frac{2}{\alpha_0-4\,\beta_1}$

	$\sigma_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^+}^{\#2}{}_{\alpha\beta}$	$\tau_{1^+}^{\#1}{}_{\alpha\beta}$
$\sigma_{1^+}^{\#1\,\dagger}{}^{\alpha\beta}$	0	$\frac{2\,\sqrt{2}}{(\alpha_0-4\,\beta_1)\,(1+k^2)}$	$\frac{2\,i\,\sqrt{2}\,k}{(\alpha_0-4\,\beta_1)\,(1+k^2)}$
$\sigma_{1^+}^{\#2\,\dagger}{}^{\alpha\beta}$	$\frac{2\,\sqrt{2}}{(\alpha_0-4\,\beta_1)\,(1+k^2)}$	$-\frac{2}{(\alpha_0-4\,\beta_1)\,(1+k^2)^2}$	$-\frac{2\,i\,k}{(\alpha_0-4\,\beta_1)\,(1+k^2)^2}$
$\tau_{1^+}^{\#1\,\dagger}{}^{\alpha\beta}$	$-\frac{2\,i\,\sqrt{2}\,k}{(\alpha_0-4\,\beta_1)\,(1+k^2)}$	$-\frac{2\,i\,k}{(\alpha_0-4\,\beta_1)\,(1+k^2)^2}$	$-\frac{2\,k^2}{(\alpha_0-4\,\beta_1)\,(1+k^2)^2}$
$\sigma_{1^-}^{\#1\,\dagger}{}^{\alpha}$	0	0	0
$\sigma_{1^-}^{\#2\,\dagger}{}^{\alpha}$	0	0	0
$\tau_{1^-}^{\#1\,\dagger}{}^{\alpha}$	0	0	0
$\tau_{1^-}^{\#2\,\dagger}{}^{\alpha}$	0	0	0

	$\omega_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^+}^{\#2}{}_{\alpha\beta}$	$f_{1^+}^{\#1}{}_{\alpha\beta}$
$\omega_{1^+}^{\#1\,\dagger}{}^{\alpha\beta}$	$\frac{1}{4}\,(\alpha_0-4\,\beta_1)$	$\frac{\alpha_0-4\,\beta_1}{2\,\sqrt{2}}$	$\frac{i\,(\alpha_0-4\,\beta_1)\,k}{2\,\sqrt{2}}$
$\omega_{1^+}^{\#2\,\dagger}{}^{\alpha\beta}$	$\frac{\alpha_0-4\,\beta_1}{2\,\sqrt{2}}$	0	0
$f_{1^+}^{\#1\,\dagger}{}^{\alpha\beta}$	$-\frac{i\,(\alpha_0-4\,\beta_1)\,k}{2\,\sqrt{2}}$	0	0
$\omega_{1^-}^{\#1\,\dagger}{}^{\alpha}$	0	0	$\frac{1}{4}\,(\alpha_0-4\,\beta_1)$
$\omega_{1^-}^{\#2\,\dagger}{}^{\alpha}$	0	0	$-\frac{\alpha_0-4\,\beta_1}{2\,\sqrt{2}}$
$f_{1^-}^{\#1\,\dagger}{}^{\alpha}$	0	0	0
$f_{1^-}^{\#2\,\dagger}{}^{\alpha}$	0	0	$\frac{1}{2}\,i\,(\alpha_0-4\,\beta_1)\,k$

	$\omega_{1^-}^{\#1}{}_{\alpha}$	$f_{1^-}^{\#1}{}_{\alpha}$	$\omega_{1^-}^{\#2}{}_{\alpha}$	$f_{1^-}^{\#2}{}_{\alpha}$
$\omega_{1^+}^{\#1\,\dagger}{}^{\alpha\beta}$	0	0	0	$-\frac{1}{2}\,i\,(\alpha_0-4\,\beta_1)\,k$
$\omega_{1^+}^{\#2\,\dagger}{}^{\alpha\beta}$	0	0	$-\frac{\alpha_0-4\,\beta_1}{2\,\sqrt{2}}$	0
$f_{1^+}^{\#1\,\dagger}{}^{\alpha\beta}$	0	0	0	0
$\omega_{1^-}^{\#1\,\dagger}{}^{\alpha}$	$\frac{1}{4}\,(\alpha_0-4\,\beta_1)$	0	0	0
$\omega_{1^-}^{\#2\,\dagger}{}^{\alpha}$	0	0	0	0
$f_{1^-}^{\#1\,\dagger}{}^{\alpha}$	0	0	0	0
$f_{1^-}^{\#2\,\dagger}{}^{\alpha}$	0	0	0	$\frac{1}{2}\,i\,(\alpha_0-4\,\beta_1)\,k$

	$\omega_{0^+}^{\#1}$	$f_{0^+}^{\#1}$	$f_{0^+}^{\#2}$	$\omega_{0^-}^{\#1}$
$\omega_{0^+}^{\#1\,\dagger}$	$\frac{\alpha_0}{2}-2\,\beta_1+\alpha_6\,k^2$	$-\frac{i\,(\alpha_0-4\,\beta_1)\,k}{\sqrt{2}}$	0	0
$f_{0^+}^{\#1\,\dagger}$	$\frac{i\,(\alpha_0-4\,\beta_1)\,k}{\sqrt{2}}$	$-4\,\beta_1\,k^2$	0	0
$f_{0^+}^{\#2\,\dagger}$	0	0	0	0
$\omega_{0^-}^{\#1\,\dagger}$	0	0	0	$\frac{1}{2}\,(\alpha_0-4\,\beta_1)$

Source constraints

SO(3) irreps	#
$\tau_{0^+}^{\#2}==0$	1
$\tau_{1^-}^{\#2\,\alpha}+2\,i\,k\,\sigma_{1^-}^{\#2\,\alpha}==0$	3
$\tau_{1^-}^{\#1\,\alpha}==0$	3
$\tau_{1^+}^{\#1\,\alpha\beta}+i\,k\,\sigma_{1^+}^{\#2\,\alpha\beta}==0$	3
Total #:	10

Lagrangian density

$$
\begin{aligned}
&-\tfrac{1}{2}\,\alpha_0\,\omega_{\alpha\chi\beta}\,\omega^{\alpha\beta\chi}-\tfrac{1}{2}\,\alpha_0\,\omega^{\alpha\beta}{}_{\alpha}\,\omega_{\beta}{}^{\chi}+2\,\beta_1\,\omega^{\alpha\beta}{}_{\alpha}\,\omega_{\beta}{}^{\chi}-\\
&2\,\beta_1\,\omega_{\alpha}{}^{\chi\delta}\,\omega_{\chi\delta}{}^{\alpha}-2\,\beta_1\,\omega_{\alpha}{}^{\chi}{}_{\chi}\,\partial_{\beta}f^{\alpha\beta}-2\,\beta_1\,\omega_{\alpha}{}^{\delta}{}_{\delta}\,\partial_{\beta}f^{\alpha\beta}-\\
&\alpha_0\,f^{\alpha\beta}\,\partial_{\beta}\omega_{\alpha}{}^{\chi}{}_{\chi}+\alpha_0\,\partial_{\beta}\omega^{\alpha\beta}{}_{\alpha}+2\,\beta_1\,\omega_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}f^{\alpha}{}_{\alpha}+2\,\beta_1\,\omega^{\beta}{}_{\beta}{}^{\delta}{}_{\delta}\,\partial^{\alpha}f_{\alpha}-\\
&2\,\beta_1\,\partial_{\beta}f^{\chi}{}_{\chi}\,\partial^{\beta}f^{\alpha}{}_{\alpha}+\alpha_0\,f^{\alpha\beta}\,\partial_{\chi}\omega^{\chi}{}_{\alpha\beta}-\alpha_0\,f^{\alpha}{}_{\alpha}\,\partial_{\chi}\omega^{\beta\chi}{}_{\beta}+\\
&4\,\beta_1\,\omega_{\alpha\chi\beta}\,\partial^{\chi}f^{\alpha\beta}+\beta_1\,\partial_{\chi}f^{\delta}{}_{\beta}\,\partial^{\chi}f^{\beta}{}_{\delta}+\beta_1\,\partial_{\chi}f^{\delta}{}_{\delta}\,\partial^{\chi}f^{\beta}{}_{\beta}+\\
&4\,\beta_1\,\partial^{\beta}f^{\alpha}{}_{\alpha}\,\partial_{\delta}f_{\beta}{}^{\delta}-2\,\beta_1\,\partial_{\beta}f^{\beta}{}_{\chi}\,\partial_{\delta}f^{\chi\delta}+\tfrac{2}{3}\,\alpha_6\,\partial_{\beta}\omega^{\alpha\beta}{}_{\alpha}\,\partial_{\delta}\omega^{\chi\delta}{}_{\chi}-\\
&\beta_1\,\partial^{\chi}f_{\zeta}{}^{\beta}\,\partial^{\zeta}f_{\beta\chi}-\beta_1\,\partial^{\chi}f_{\zeta}{}^{\beta}\,\partial^{\zeta}f_{\chi\beta}+\beta_1\,\partial^{\chi}f_{\delta\zeta}\,\partial^{\zeta}f^{\delta}{}_{\chi}-\beta_1\,\partial^{\chi}f_{\zeta\delta}\,\partial^{\zeta}f_{\chi}{}^{\delta}
\end{aligned}
$$

Added source term: $f^{\alpha\beta}\,\tau_{\alpha\beta}+\omega^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi}$