Lagrangian density

$$
\begin{aligned}
&-\tfrac{1}{3} t_1 \omega_{\iota}{}^{\alpha\iota}\,\omega_{\kappa\alpha}{}^{\kappa}-\tfrac{1}{3} t_1 \omega_{\iota}{}^{\kappa\lambda}\,\omega_{\kappa\lambda}{}^{\iota}+\tfrac{2}{3} t_2 \omega_{\iota}{}^{\kappa\lambda}\,\omega_{\kappa\lambda}{}^{\iota}+\tfrac{1}{3} t_1 \omega_{\kappa\lambda}{}^{\iota}\,\omega^{\kappa\lambda}{}_{\iota}+\\
&\tfrac{1}{3} t_2 \omega_{\kappa\lambda}{}^{\iota}\,\omega^{\kappa\lambda}{}_{\iota}+f^{\alpha\beta}\,\tau_{\alpha\beta}+\omega^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi}+\tfrac{2}{3} r_2 \partial^{\beta}\omega^{\theta\alpha}{}_{\kappa}\partial_{\theta}\omega_{\alpha\beta}{}^{\kappa}-\\
&\tfrac{1}{3} r_2 \partial_{\theta}\omega_{\alpha\beta}{}^{\kappa}\partial_{\kappa}\omega^{\alpha\beta\theta}-\tfrac{2}{3} r_2 \partial_{\theta}\omega_{\alpha\beta}{}^{\kappa}\partial_{\kappa}\omega^{\theta\alpha\beta}+4 r_3 \partial_{\alpha}\omega_{\lambda}{}^{\alpha}{}_{\theta}\partial_{\kappa}\omega^{\theta\kappa\lambda}-\\
&4 r_3 \partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\partial_{\kappa}\omega^{\theta\kappa\lambda}-\tfrac{1}{3} t_1 \partial^{\alpha}f_{\theta\kappa}\partial^{\kappa}f_{\alpha}{}^{\theta}+\tfrac{1}{6} t_2 \partial^{\alpha}f_{\theta\kappa}\partial^{\kappa}f_{\alpha}{}^{\theta}-\tfrac{2}{3} t_1 \partial^{\alpha}f_{\kappa\theta}\partial^{\kappa}f_{\alpha}{}^{\theta}-\\
&\tfrac{1}{6} t_2 \partial^{\alpha}f_{\kappa\theta}\partial^{\kappa}f_{\alpha}{}^{\theta}-\tfrac{1}{3} t_1 \partial^{\alpha}f^{\lambda}{}_{\kappa}\partial^{\kappa}f_{\alpha\lambda}+\tfrac{1}{6} t_2 \partial^{\alpha}f^{\lambda}{}_{\kappa}\partial^{\kappa}f_{\alpha\lambda}+\tfrac{1}{3} t_1 \omega_{\kappa\alpha}{}^{\alpha}\partial^{\kappa}f^{\iota}{}_{\iota}+\\
&\tfrac{1}{3} t_1 \omega_{\kappa\lambda}{}^{\lambda}\partial^{\kappa}f^{\iota}{}_{\iota}+\tfrac{2}{3} t_1 \partial^{\alpha}f_{\kappa\alpha}\partial^{\kappa}f^{\iota}{}_{\iota}-\tfrac{1}{3} t_1 \partial_{\kappa}f^{\lambda}{}_{\lambda}\partial^{\kappa}f^{\iota}{}_{\iota}+\tfrac{1}{3} t_1 \omega_{\iota\theta\kappa}\partial^{\kappa}f^{\iota\theta}+\\
&\tfrac{1}{3} t_2 \omega_{\iota\theta\kappa}\partial^{\kappa}f^{\iota\theta}+\tfrac{4}{3} t_1 \omega_{\iota\kappa\theta}\partial^{\kappa}f^{\iota\theta}-\tfrac{2}{3} t_2 \omega_{\iota\kappa\theta}\partial^{\kappa}f^{\iota\theta}-\tfrac{1}{3} t_1 \omega_{\theta\iota\kappa}\partial^{\kappa}f^{\iota\theta}-\\
&\tfrac{1}{3} t_2 \omega_{\theta\iota\kappa}\partial^{\kappa}f^{\iota\theta}+\tfrac{2}{3} t_1 \omega_{\theta\kappa\iota}\partial^{\kappa}f^{\iota\theta}+\tfrac{2}{3} t_2 \omega_{\theta\kappa\iota}\partial^{\kappa}f^{\iota\theta}-\tfrac{1}{3} t_1 \omega_{\iota\alpha}{}^{\alpha}\partial^{\kappa}f^{\iota}{}_{\kappa}-\\
&\tfrac{1}{3} t_1 \omega_{\iota\lambda}{}^{\lambda}\partial^{\kappa}f^{\iota}{}_{\kappa}+\tfrac{1}{3} t_1 \partial^{\alpha}f^{\lambda}{}_{\kappa}\partial^{\kappa}f_{\lambda\alpha}-\tfrac{1}{6} t_2 \partial^{\alpha}f^{\lambda}{}_{\kappa}\partial^{\kappa}f_{\lambda\alpha}+\tfrac{1}{3} t_1 \partial_{\kappa}f_{\theta}{}^{\lambda}\partial^{\kappa}f_{\lambda}{}^{\theta}-\\
&\tfrac{1}{6} t_2 \partial_{\kappa}f_{\theta}{}^{\lambda}\partial^{\kappa}f_{\lambda}{}^{\theta}+\tfrac{2}{3} t_1 \partial_{\kappa}f^{\lambda}{}_{\theta}\partial^{\kappa}f_{\lambda}{}^{\theta}+\tfrac{1}{6} t_2 \partial_{\kappa}f^{\lambda}{}_{\theta}\partial^{\kappa}f_{\lambda}{}^{\theta}-\tfrac{1}{3} t_1 \partial^{\alpha}f^{\lambda}{}_{\alpha}\partial^{\kappa}f_{\lambda\kappa}+\\
&\tfrac{1}{3} r_2 \partial_{\kappa}\omega^{\alpha\beta\theta}\partial^{\kappa}\omega_{\alpha\beta\theta}+\tfrac{2}{3} r_2 \partial_{\kappa}\omega^{\theta\alpha\beta}\partial^{\kappa}\omega_{\alpha\beta\theta}-\tfrac{2}{3} r_2 \partial^{\beta}\omega_{\iota}{}^{\alpha\lambda}\partial_{\lambda}\omega_{\alpha\beta}{}^{\iota}+\\
&\tfrac{2}{3} r_2 \partial^{\beta}\omega_{\iota}{}^{\lambda\alpha}\partial_{\lambda}\omega_{\alpha\beta}{}^{\iota}-4 r_3 \partial^{\beta}\omega_{\iota}{}^{\lambda\alpha}\partial_{\lambda}\omega_{\alpha\beta}{}^{\iota}-4 r_3 \partial_{\alpha}\omega_{\lambda}{}^{\alpha}{}_{\theta}\partial^{\lambda}\omega^{\theta\kappa}{}_{\kappa}+4 r_3 \partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\partial^{\lambda}\omega^{\theta\kappa}{}_{\kappa}
\end{aligned}
$$

	$\sigma^{\#1}_{1^+\,\alpha\beta}$	$\sigma^{\#2}_{1^+\,\alpha\beta}$	$\tau^{\#1}_{1^+\,\alpha\beta}$	$\sigma^{\#1}_{1^-\,\alpha}$	$\sigma^{\#2}_{1^-\,\alpha}$	$\tau^{\#1}_{1^-\,\alpha}$	$\tau^{\#2}_{1^-\,\alpha}$
$\sigma^{\#1}_{1^+}\dagger^{\alpha\beta}$	$\frac{2(t_1+t_2)}{3t_1t_2}$	$\frac{\sqrt{2}(t_1-2t_2)}{3(1+k^2)t_1t_2}$	$\frac{i\sqrt{2}k(t_1-2t_2)}{3(1+k^2)t_1t_2}$	0	0	0	0
$\sigma^{\#2}_{1^+}\dagger^{\alpha\beta}$	$\frac{\sqrt{2}(t_1-2t_2)}{3(1+k^2)t_1t_2}$	$\frac{t_1+4t_2}{3(1+k^2)^2t_1t_2}$	$\frac{ik(t_1+4t_2)}{3(1+k^2)^2t_1t_2}$	0	0	0	0
$\tau^{\#1}_{1^+}\dagger^{\alpha\beta}$	$-\frac{i\sqrt{2}k(t_1-2t_2)}{3(1+k^2)t_1t_2}$	$-\frac{ik(t_1+4t_2)}{3(1+k^2)^2t_1t_2}$	$\frac{k^2(t_1+4t_2)}{3(1+k^2)^2t_1t_2}$	0	0	0	0
$\sigma^{\#1}_{1^-}\dagger^{\alpha}$	0	0	0	$\frac{6}{(3+4k^2)^2t_1}$	$\frac{6\sqrt{2}}{(3+4k^2)^2t_1}$	0	$\frac{12ik}{(3+4k^2)^2t_1}$
$\sigma^{\#2}_{1^-}\dagger^{\alpha}$	0	0	0	$\frac{6\sqrt{2}}{(3+4k^2)^2t_1}$	$\frac{12}{(3+4k^2)^2t_1}$	0	$\frac{12i\sqrt{2}k}{(3+4k^2)^2t_1}$
$\tau^{\#1}_{1^-}\dagger^{\alpha}$	0	0	0	0	0	0	0
$\tau^{\#2}_{1^-}\dagger^{\alpha}$	0	0	0	$-\frac{12ik}{(3+4k^2)^2t_1}$	$-\frac{12i\sqrt{2}k}{(3+4k^2)^2t_1}$	0	$\frac{24k^2}{(3+4k^2)^2t_1}$

	$\omega^{\#1}_{1^+\,\alpha\beta}$	$\omega^{\#2}_{1^+\,\alpha\beta}$	$f^{\#1}_{1^+\,\alpha\beta}$	$\omega^{\#1}_{1^-\,\alpha}$	$\omega^{\#2}_{1^-\,\alpha}$	$f^{\#1}_{1^-\,\alpha}$	$f^{\#2}_{1^-\,\alpha}$
$\omega^{\#1}_{1^+}\dagger^{\alpha\beta}$	$\frac{1}{6}(t_1+4t_2)$	$-\frac{t_1-2t_2}{3\sqrt{2}}$	$-\frac{ik(t_1-2t_2)}{3\sqrt{2}}$	0	0	0	0
$\omega^{\#2}_{1^+}\dagger^{\alpha\beta}$	$-\frac{t_1-2t_2}{3\sqrt{2}}$	$\frac{t_1+t_2}{3}$	$\frac{1}{3}ik(t_1+t_2)$	0	0	0	0
$f^{\#1}_{1^+}\dagger^{\alpha\beta}$	$\frac{ik(t_1-2t_2)}{3\sqrt{2}}$	$-\frac{1}{3}ik(t_1+t_2)$	$\frac{1}{3}k^2(t_1+t_2)$	0	0	0	0
$\omega^{\#1}_{1^-}\dagger^{\alpha}$	0	0	0	$\frac{t_1}{6}$	$\frac{t_1}{3\sqrt{2}}$	0	$\frac{ikt_1}{3}$
$\omega^{\#2}_{1^-}\dagger^{\alpha}$	0	0	0	$\frac{t_1}{3\sqrt{2}}$	$\frac{t_1}{3}$	0	$\frac{1}{3}i\sqrt{2}\,kt_1$
$f^{\#1}_{1^-}\dagger^{\alpha}$	0	0	0	0	0	0	0
$f^{\#2}_{1^-}\dagger^{\alpha}$	0	0	0	$-\frac{1}{3}ikt_1$	$-\frac{1}{3}i\sqrt{2}\,kt_1$	0	$\frac{2k^2t_1}{3}$

	$\omega^{\#1}_{2^+\,\alpha\beta}$	$f^{\#1}_{2^+\,\alpha\beta}$	$\omega^{\#1}_{2^-\,\alpha\beta\chi}$
$\omega^{\#1}_{2^+}\dagger^{\alpha\beta}$	$\frac{t_1}{2}$	$-\frac{ikt_1}{\sqrt{2}}$	0
$f^{\#1}_{2^+}\dagger^{\alpha\beta}$	$\frac{ikt_1}{\sqrt{2}}$	k^2t_1	0
$\omega^{\#1}_{2^-}\dagger^{\alpha\beta\chi}$	0	0	$\frac{t_1}{2}$

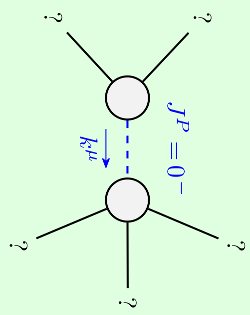
	$\sigma^{\#1}_{0^+}$	$\tau^{\#1}_{0^+}$	$\tau^{\#2}_{0^+}$	$\sigma^{\#1}_{0^-}$
$\sigma^{\#1}_{0^+}\dagger$	$\frac{1}{6k^2r_3}$	0	0	0
$\tau^{\#1}_{0^+}\dagger$	0	0	0	0
$\tau^{\#2}_{0^+}\dagger$	0	0	0	0
$\sigma^{\#1}_{0^-}\dagger$	0	0	0	$\frac{1}{k^2r_2+t_2}$

	$\omega^{\#1}_{0^+}$	$f^{\#1}_{0^+}$	$f^{\#2}_{0^+}$	$\omega^{\#1}_{0^-}$
$\omega^{\#1}_{0^+}\dagger$	$6k^2r_3$	0	0	0
$f^{\#1}_{0^+}\dagger$	0	0	0	0
$f^{\#2}_{0^+}\dagger$	0	0	0	0
$\omega^{\#1}_{0^-}\dagger$	0	0	0	$k^2r_2+t_2$

Source constraints

SO(3) irreps	#
$\tau^{\#2}_{0^+} == 0$	1
$\tau^{\#1}_{0^+} == 0$	1
$\tau^{\#2}_{1^-}{}^{\alpha} + 2ik\,\sigma^{\#1}_{1^-}{}^{\alpha} == 0$	3
$\tau^{\#1}_{1^-}{}^{\alpha} == 0$	3
$\sigma^{\#1}_{1^-}{}^{\alpha} == \sigma^{\#2}_{1^-}{}^{\alpha}$	3
$\tau^{\#1}_{1^+}{}^{\alpha\beta} + ik\,\sigma^{\#2}_{1^+}{}^{\alpha\beta} == 0$	3
$\tau^{\#1}_{2^+}{}^{\alpha\beta} - 2ik\,\sigma^{\#1}_{2^+}{}^{\alpha\beta} == 0$	5
Total #:	19

	$\sigma^{\#1}_{2^+\,\alpha\beta}$	$\tau^{\#1}_{2^+\,\alpha\beta}$	$\sigma^{\#1}_{2^-\,\alpha\beta\chi}$
$\sigma^{\#1}_{2^+}\dagger^{\alpha\beta}$	$\frac{2}{(1+2k^2)^2t_1}$	$-\frac{2i\sqrt{2}k}{(1+2k^2)^2t_1}$	0
$\tau^{\#1}_{2^+}\dagger^{\alpha\beta}$	$\frac{2i\sqrt{2}k}{(1+2k^2)^2t_1}$	$\frac{4k^2}{(1+2k^2)^2t_1}$	0
$\sigma^{\#1}_{2^-}\dagger^{\alpha\beta\chi}$	0	0	$\frac{2}{t_1}$



Massive particle	
Pole residue:	$-\frac{1}{r_2} > 0$
Polarisations:	1
Square mass:	$-\frac{t_2}{r_2} > 0$
Spin:	0
Parity:	Odd

(No massless particles)

Unitarity conditions

$r_2 < 0$ && $t_2 > 0$