General Gauge:

$$\eta^{\alpha\beta}\ \partial_\alpha h_{\beta\nu} == \frac{J\ \eta^{\alpha\beta}\ h_{\nu\alpha}\ \partial_\beta \Omega}{\Omega} + P\ \Omega^2\ \partial_\nu h + R\ h\ \Omega\ \partial_\nu \Omega$$

Ω[t]

General

00	$-\frac{\partial_0\partial_0 h_{00}}{2\,\Omega[t]^2}-\frac{1}{2}P\,\partial_0\partial_0 h+\frac{\partial_1\partial_1 h_{00}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h}{2}-\frac{1}{2}P\,\partial_1\partial_1 h+\frac{\partial_2\partial_2 h_{00}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h}{2}-\frac{1}{2}P\,\partial_2\partial_2 h+\frac{\partial_3\partial_3 h_{00}}{2\,\Omega[t]^2}+$ $\frac{\partial_3\partial_3 h}{2}-\frac{1}{2}P\,\partial_3\partial_3 h+\frac{\partial_0 h_{00}\,\Omega'[t]}{\Omega[t]^3}+\frac{J\,\partial_0 h_{00}\,\Omega'[t]}{\Omega[t]^3}-\frac{\partial_0 h\,\Omega'[t]}{\Omega[t]}+\frac{P\,\partial_0 h\,\Omega'[t]}{\Omega[t]}+\frac{J\,P\,\partial_0 h\,\Omega'[t]}{2\,\Omega[t]}-\frac{R\,\partial_0 h\,\Omega'[t]}{2\,\Omega[t]}+$ $\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{5\,J\,h_{00}\,\Omega'[t]^2}{2\,\Omega[t]^4}-\frac{J^2\,h_{00}\,\Omega'[t]^2}{2\,\Omega[t]^4}+\frac{3\,R\,h\,\Omega'[t]^2}{2\,\Omega[t]^2}+\frac{J\,R\,h\,\Omega'[t]^2}{2\,\Omega[t]^2}+\frac{J\,h_{00}\,\Omega''[t]}{2\,\Omega[t]^3}-\frac{R\,h\,\Omega''[t]}{2\,\Omega[t]}$
11	$-\frac{\partial_0\partial_0 h_{11}}{2\,\Omega[t]^2}+\frac{\partial_0\partial_0 h}{2}-\frac{1}{2}P\,\partial_0\partial_0 h+\frac{\partial_1\partial_1 h_{11}}{2\,\Omega[t]^2}-\frac{1}{2}P\,\partial_1\partial_1 h+\frac{\partial_2\partial_2 h_{11}}{2\,\Omega[t]^2}-\frac{\partial_2\partial_2 h}{2}+$ $\frac{1}{2}P\,\partial_2\partial_2 h+\frac{\partial_3\partial_3 h_{11}}{2\,\Omega[t]^2}-\frac{\partial_3\partial_3 h}{2}+\frac{1}{2}P\,\partial_3\partial_3 h+\frac{\partial_0 h_{11}\,\Omega'[t]}{\Omega[t]^3}+\frac{\partial_0 h\,\Omega'[t]}{\Omega[t]}-\frac{P\,\partial_0 h\,\Omega'[t]}{\Omega[t]}-$ $\frac{J\,P\,\partial_0 h\,\Omega'[t]}{2\,\Omega[t]}-\frac{R\,\partial_0 h\,\Omega'[t]}{2\,\Omega[t]}+\frac{J\,\partial_1 h_{01}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{J\,h_{00}\,\Omega'[t]^2}{2\,\Omega[t]^4}+\frac{J^2\,h_{00}\,\Omega'[t]^2}{2\,\Omega[t]^4}-$ $\frac{2\,h_{11}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{R\,h\,\Omega'[t]^2}{2\,\Omega[t]^2}-\frac{J\,R\,h\,\Omega'[t]^2}{2\,\Omega[t]^2}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{J\,h_{00}\,\Omega''[t]}{2\,\Omega[t]^3}+\frac{3\,h_{11}\,\Omega''[t]}{\Omega[t]^3}-\frac{R\,h\,\Omega''[t]}{2\,\Omega[t]}$
22	$-\frac{\partial_0\partial_0 h_{22}}{2\,\Omega[t]^2}+\frac{\partial_0\partial_0 h}{2}-\frac{1}{2}P\,\partial_0\partial_0 h+\frac{\partial_1\partial_1 h_{22}}{2\,\Omega[t]^2}-\frac{\partial_1\partial_1 h}{2}+\frac{1}{2}P\,\partial_1\partial_1 h+\frac{\partial_2\partial_2 h_{22}}{2\,\Omega[t]^2}-$ $\frac{1}{2}P\,\partial_2\partial_2 h+\frac{\partial_3\partial_3 h_{22}}{2\,\Omega[t]^2}-\frac{\partial_3\partial_3 h}{2}+\frac{1}{2}P\,\partial_3\partial_3 h+\frac{\partial_0 h_{22}\,\Omega'[t]}{\Omega[t]^3}+\frac{\partial_0 h\,\Omega'[t]}{\Omega[t]}-\frac{P\,\partial_0 h\,\Omega'[t]}{\Omega[t]}-$ $\frac{J\,P\,\partial_0 h\,\Omega'[t]}{2\,\Omega[t]}-\frac{R\,\partial_0 h\,\Omega'[t]}{2\,\Omega[t]}+\frac{J\,\partial_2 h_{02}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{J\,h_{00}\,\Omega'[t]^2}{2\,\Omega[t]^4}+\frac{J^2\,h_{00}\,\Omega'[t]^2}{2\,\Omega[t]^4}-$ $\frac{2\,h_{22}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{R\,h\,\Omega'[t]^2}{2\,\Omega[t]^2}-\frac{J\,R\,h\,\Omega'[t]^2}{2\,\Omega[t]^2}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{J\,h_{00}\,\Omega''[t]}{2\,\Omega[t]^3}+\frac{3\,h_{22}\,\Omega''[t]}{\Omega[t]^3}-\frac{R\,h\,\Omega''[t]}{2\,\Omega[t]}$
33	$-\frac{\partial_0\partial_0 h_{33}}{2\,\Omega[t]^2}+\frac{\partial_0\partial_0 h}{2}-\frac{1}{2}P\,\partial_0\partial_0 h+\frac{\partial_1\partial_1 h_{33}}{2\,\Omega[t]^2}-\frac{\partial_1\partial_1 h}{2}+\frac{1}{2}P\,\partial_1\partial_1 h+\frac{\partial_2\partial_2 h_{33}}{2\,\Omega[t]^2}-$ $\frac{\partial_2\partial_2 h}{2}+\frac{1}{2}P\,\partial_2\partial_2 h+\frac{\partial_3\partial_3 h_{33}}{2\,\Omega[t]^2}-\frac{1}{2}P\,\partial_3\partial_3 h+\frac{\partial_0 h_{33}\,\Omega'[t]}{\Omega[t]^3}+\frac{\partial_0 h\,\Omega'[t]}{\Omega[t]}-\frac{P\,\partial_0 h\,\Omega'[t]}{\Omega[t]}-$ $\frac{J\,P\,\partial_0 h\,\Omega'[t]}{2\,\Omega[t]}-\frac{R\,\partial_0 h\,\Omega'[t]}{2\,\Omega[t]}+\frac{J\,\partial_3 h_{03}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{J\,h_{00}\,\Omega'[t]^2}{2\,\Omega[t]^4}+\frac{J^2\,h_{00}\,\Omega'[t]^2}{2\,\Omega[t]^4}-$ $\frac{2\,h_{33}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{R\,h\,\Omega'[t]^2}{2\,\Omega[t]^2}-\frac{J\,R\,h\,\Omega'[t]^2}{2\,\Omega[t]^2}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{J\,h_{00}\,\Omega''[t]}{2\,\Omega[t]^3}+\frac{3\,h_{33}\,\Omega''[t]}{\Omega[t]^3}-\frac{R\,h\,\Omega''[t]}{2\,\Omega[t]}$
01	$-\frac{\partial_0\partial_0 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_0\partial_1 h}{2}-P\,\partial_0\partial_1 h+\frac{\partial_1\partial_1 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{01}\,\Omega'[t]}{\Omega[t]^3}+$ $\frac{J\,\partial_0 h_{01}\,\Omega'[t]}{2\,\Omega[t]^3}+\frac{J\,\partial_1 h_{00}\,\Omega'[t]}{2\,\Omega[t]^3}-\frac{R\,\partial_1 h\,\Omega'[t]}{2\,\Omega[t]}-\frac{h_{01}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{3\,J\,h_{01}\,\Omega'[t]^2}{2\,\Omega[t]^4}+\frac{2\,h_{01}\,\Omega''[t]}{\Omega[t]^3}+\frac{J\,h_{01}\,\Omega''[t]}{2\,\Omega[t]^3}$
02	$-\frac{\partial_0\partial_0 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_0\partial_2 h}{2}-P\,\partial_0\partial_2 h+\frac{\partial_1\partial_1 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{02}\,\Omega'[t]}{\Omega[t]^3}+$ $\frac{J\,\partial_0 h_{02}\,\Omega'[t]}{2\,\Omega[t]^3}+\frac{J\,\partial_2 h_{00}\,\Omega'[t]}{2\,\Omega[t]^3}-\frac{R\,\partial_2 h\,\Omega'[t]}{2\,\Omega[t]}-\frac{h_{02}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{3\,J\,h_{02}\,\Omega'[t]^2}{2\,\Omega[t]^4}+\frac{2\,h_{02}\,\Omega''[t]}{\Omega[t]^3}+\frac{J\,h_{02}\,\Omega''[t]}{2\,\Omega[t]^3}$
03	$-\frac{\partial_0\partial_0 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_0\partial_3 h}{2}-P\,\partial_0\partial_3 h+\frac{\partial_1\partial_1 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{03}\,\Omega'[t]}{\Omega[t]^3}+$ $\frac{J\,\partial_0 h_{03}\,\Omega'[t]}{2\,\Omega[t]^3}+\frac{J\,\partial_3 h_{00}\,\Omega'[t]}{2\,\Omega[t]^3}-\frac{R\,\partial_3 h\,\Omega'[t]}{2\,\Omega[t]}-\frac{h_{03}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{3\,J\,h_{03}\,\Omega'[t]^2}{2\,\Omega[t]^4}+\frac{2\,h_{03}\,\Omega''[t]}{\Omega[t]^3}+\frac{J\,h_{03}\,\Omega''[t]}{2\,\Omega[t]^3}$
12	$-\frac{\partial_0\partial_0 h_{12}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{12}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_2 h}{2}-P\,\partial_1\partial_2 h+\frac{\partial_2\partial_2 h_{12}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{12}}{2\,\Omega[t]^2}+$ $\frac{\partial_0 h_{12}\,\Omega'[t]}{\Omega[t]^3}+\frac{J\,\partial_1 h_{02}\,\Omega'[t]}{2\,\Omega[t]^3}+\frac{J\,\partial_2 h_{01}\,\Omega'[t]}{2\,\Omega[t]^3}-\frac{2\,h_{12}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3\,h_{12}\,\Omega''[t]}{\Omega[t]^3}$
13	$-\frac{\partial_0\partial_0 h_{13}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{13}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_3 h}{2}-P\,\partial_1\partial_3 h+\frac{\partial_2\partial_2 h_{13}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{13}}{2\,\Omega[t]^2}+$ $\frac{\partial_0 h_{13}\,\Omega'[t]}{\Omega[t]^3}+\frac{J\,\partial_1 h_{03}\,\Omega'[t]}{2\,\Omega[t]^3}+\frac{J\,\partial_3 h_{01}\,\Omega'[t]}{2\,\Omega[t]^3}-\frac{2\,h_{13}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3\,h_{13}\,\Omega''[t]}{\Omega[t]^3}$
23	$-\frac{\partial_0\partial_0 h_{23}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{23}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{23}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_3 h}{2}-P\,\partial_2\partial_3 h+\frac{\partial_3\partial_3 h_{23}}{2\,\Omega[t]^2}+$ $\frac{\partial_0 h_{23}\,\Omega'[t]}{\Omega[t]^3}+\frac{J\,\partial_2 h_{03}\,\Omega'[t]}{2\,\Omega[t]^3}+\frac{J\,\partial_3 h_{02}\,\Omega'[t]}{2\,\Omega[t]^3}-\frac{2\,h_{23}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3\,h_{23}\,\Omega''[t]}{\Omega[t]^3}$

Now with J=0, R=0, P=1

(J=0 necessary for $\delta G_{\mu i}$ to diagonalize)

00	$-\frac{\partial_0\partial_0 h_{00}}{2\,\Omega[t]^2}-\frac{\partial_0\partial_0 h}{2}+\frac{\partial_1\partial_1 h_{00}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{00}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{00}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{00}\,\Omega'[t]}{\Omega[t]^3}+\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}$
11	$-\frac{\partial_0\partial_0 h_{11}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{11}}{2\,\Omega[t]^2}-\frac{\partial_1\partial_1 h}{2}+\frac{\partial_2\partial_2 h_{11}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{11}}{2\,\Omega[t]^2}+$ $\frac{\partial_0 h_{11}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{2\,h_{11}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{3\,h_{11}\,\Omega''[t]}{\Omega[t]^3}$
22	$-\frac{\partial_0\partial_0 h_{22}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{22}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{22}}{2\,\Omega[t]^2}-\frac{\partial_2\partial_2 h}{2}+\frac{\partial_3\partial_3 h_{22}}{2\,\Omega[t]^2}+$ $\frac{\partial_0 h_{22}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{2\,h_{22}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{3\,h_{22}\,\Omega''[t]}{\Omega[t]^3}$
33	$-\frac{\partial_0\partial_0 h_{33}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{33}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{33}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{33}}{2\,\Omega[t]^2}-\frac{\partial_3\partial_3 h}{2}+$ $\frac{\partial_0 h_{33}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{2\,h_{33}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{3\,h_{33}\,\Omega''[t]}{\Omega[t]^3}$
01	$-\frac{\partial_0\partial_0 h_{01}}{2\,\Omega[t]^2}-\frac{\partial_0\partial_1 h}{2}+\frac{\partial_1\partial_1 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{01}\,\Omega'[t]}{\Omega[t]^3}-\frac{h_{01}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{2\,h_{01}\,\Omega''[t]}{\Omega[t]^3}$
02	$-\frac{\partial_0\partial_0 h_{02}}{2\,\Omega[t]^2}-\frac{\partial_0\partial_2 h}{2}+\frac{\partial_1\partial_1 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{02}\,\Omega'[t]}{\Omega[t]^3}-\frac{h_{02}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{2\,h_{02}\,\Omega''[t]}{\Omega[t]^3}$
03	$-\frac{\partial_0\partial_0 h_{03}}{2\,\Omega[t]^2}-\frac{\partial_0\partial_3 h}{2}+\frac{\partial_1\partial_1 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{03}\,\Omega'[t]}{\Omega[t]^3}-\frac{h_{03}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{2\,h_{03}\,\Omega''[t]}{\Omega[t]^3}$
12	$-\frac{\partial_0\partial_0 h_{12}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{12}}{2\,\Omega[t]^2}-\frac{\partial_1\partial_2 h}{2}+\frac{\partial_2\partial_2 h_{12}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{12}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{12}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{12}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3\,h_{12}\,\Omega''[t]}{\Omega[t]^3}$
13	$-\frac{\partial_0\partial_0 h_{13}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{13}}{2\,\Omega[t]^2}-\frac{\partial_1\partial_3 h}{2}+\frac{\partial_2\partial_2 h_{13}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{13}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{13}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{13}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3\,h_{13}\,\Omega''[t]}{\Omega[t]^3}$
23	$-\frac{\partial_0\partial_0 h_{23}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{23}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{23}}{2\,\Omega[t]^2}-\frac{\partial_2\partial_3 h}{2}+\frac{\partial_3\partial_3 h_{23}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{23}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{23}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3\,h_{23}\,\Omega''[t]}{\Omega[t]^3}$

Ω = 1/Ht

J=0, R=0, P=1

00	$2\,H^2\,h_{00}-H^2\,t\,\partial_0 h_{00}-\frac{\partial_0\partial_0 h}{2}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{00}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{00}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{00}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{00}\right)$
11	$4\,H^2\,h_{11}-H^2\,t\,\partial_0 h_{11}-\frac{\partial_1\partial_1 h}{2}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{11}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{11}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{11}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{11}\right)$
22	$4\,H^2\,h_{22}-H^2\,t\,\partial_0 h_{22}-\frac{\partial_2\partial_2 h}{2}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{22}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{22}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{22}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{22}\right)$
33	$4\,H^2\,h_{33}-H^2\,t\,\partial_0 h_{33}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{33}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{33}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{33}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{33}\right)-\frac{\partial_3\partial_3 h}{2}$
01	$3\,H^2\,h_{01}-H^2\,t\,\partial_0 h_{01}-\frac{\partial_0\partial_1 h}{2}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{01}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{01}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{01}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{01}\right)$
02	$3\,H^2\,h_{02}-H^2\,t\,\partial_0 h_{02}-\frac{\partial_0\partial_2 h}{2}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{02}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{02}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{02}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{02}\right)$
03	$3\,H^2\,h_{03}-H^2\,t\,\partial_0 h_{03}-\frac{\partial_0\partial_3 h}{2}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{03}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{03}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{03}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{03}\right)$
12	$4\,H^2\,h_{12}-H^2\,t\,\partial_0 h_{12}-\frac{\partial_1\partial_2 h}{2}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{12}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{12}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{12}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{12}\right)$
13	$4\,H^2\,h_{13}-H^2\,t\,\partial_0 h_{13}-\frac{\partial_1\partial_3 h}{2}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{13}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{13}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{13}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{13}\right)$
23	$4\,H^2\,h_{23}-H^2\,t\,\partial_0 h_{23}-\frac{\partial_2\partial_3 h}{2}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{23}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{23}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{23}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{23}\right)$

Ω[t]

J=0, R=-1, P=1/2

(P=1/2 necessary for box factorization, R =-1 minimizes other terms)

00	$-\frac{\partial_0\partial_0 h_{00}}{2\,\Omega[t]^2}-\frac{\partial_0\partial_0 h}{4}+\frac{\partial_1\partial_1 h_{00}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h}{4}+\frac{\partial_2\partial_2 h_{00}}{2\,\Omega[t]^2}+$ $\frac{\partial_2\partial_2 h}{4}+\frac{\partial_3\partial_3 h_{00}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h}{4}+\frac{\partial_0 h_{00}\,\Omega'[t]}{\Omega[t]^3}+\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{3\,h\,\Omega'[t]^2}{2\,\Omega[t]^2}+\frac{h\,\Omega''[t]}{2\,\Omega[t]}$
11	$-\frac{\partial_0\partial_0 h_{11}}{2\,\Omega[t]^2}+\frac{\partial_0\partial_0 h}{4}+\frac{\partial_1\partial_1 h_{11}}{2\,\Omega[t]^2}-\frac{\partial_1\partial_1 h}{4}+\frac{\partial_2\partial_2 h_{11}}{2\,\Omega[t]^2}-\frac{\partial_2\partial_2 h}{4}+\frac{\partial_3\partial_3 h_{11}}{2\,\Omega[t]^2}-\frac{\partial_3\partial_3 h}{4}+$ $\frac{\partial_0 h_{11}\,\Omega'[t]}{\Omega[t]^3}+\frac{\partial_0 h\,\Omega'[t]}{\Omega[t]}-\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{2\,h_{11}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{h\,\Omega'[t]^2}{2\,\Omega[t]^2}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{3\,h_{11}\,\Omega''[t]}{\Omega[t]^3}+\frac{h\,\Omega''[t]}{2\,\Omega[t]}$
22	$-\frac{\partial_0\partial_0 h_{22}}{2\,\Omega[t]^2}+\frac{\partial_0\partial_0 h}{4}+\frac{\partial_1\partial_1 h_{22}}{2\,\Omega[t]^2}-\frac{\partial_1\partial_1 h}{4}+\frac{\partial_2\partial_2 h_{22}}{2\,\Omega[t]^2}-\frac{\partial_2\partial_2 h}{4}+\frac{\partial_3\partial_3 h_{22}}{2\,\Omega[t]^2}-\frac{\partial_3\partial_3 h}{4}+$ $\frac{\partial_0 h_{22}\,\Omega'[t]}{\Omega[t]^3}+\frac{\partial_0 h\,\Omega'[t]}{\Omega[t]}-\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{2\,h_{22}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{h\,\Omega'[t]^2}{2\,\Omega[t]^2}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{3\,h_{22}\,\Omega''[t]}{\Omega[t]^3}+\frac{h\,\Omega''[t]}{2\,\Omega[t]}$
33	$-\frac{\partial_0\partial_0 h_{33}}{2\,\Omega[t]^2}+\frac{\partial_0\partial_0 h}{4}+\frac{\partial_1\partial_1 h_{33}}{2\,\Omega[t]^2}-\frac{\partial_1\partial_1 h}{4}+\frac{\partial_2\partial_2 h_{33}}{2\,\Omega[t]^2}-\frac{\partial_2\partial_2 h}{4}+\frac{\partial_3\partial_3 h_{33}}{2\,\Omega[t]^2}-\frac{\partial_3\partial_3 h}{4}+$ $\frac{\partial_0 h_{33}\,\Omega'[t]}{\Omega[t]^3}+\frac{\partial_0 h\,\Omega'[t]}{\Omega[t]}-\frac{2\,h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{2\,h_{33}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{h\,\Omega'[t]^2}{2\,\Omega[t]^2}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{3\,h_{33}\,\Omega''[t]}{\Omega[t]^3}+\frac{h\,\Omega''[t]}{2\,\Omega[t]}$
01	$-\frac{\partial_0\partial_0 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{01}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{01}\,\Omega'[t]}{\Omega[t]^3}+\frac{\partial_1 h\,\Omega'[t]}{2\,\Omega[t]}-\frac{h_{01}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{2\,h_{01}\,\Omega''[t]}{\Omega[t]^3}$
02	$-\frac{\partial_0\partial_0 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{02}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{02}\,\Omega'[t]}{\Omega[t]^3}+\frac{\partial_2 h\,\Omega'[t]}{2\,\Omega[t]}-\frac{h_{02}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{2\,h_{02}\,\Omega''[t]}{\Omega[t]^3}$
03	$-\frac{\partial_0\partial_0 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{03}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{03}\,\Omega'[t]}{\Omega[t]^3}+\frac{\partial_3 h\,\Omega'[t]}{2\,\Omega[t]}-\frac{h_{03}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{2\,h_{03}\,\Omega''[t]}{\Omega[t]^3}$
12	$-\frac{\partial_0\partial_0 h_{12}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{12}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{12}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{12}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{12}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{12}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3\,h_{12}\,\Omega''[t]}{\Omega[t]^3}$
13	$-\frac{\partial_0\partial_0 h_{13}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{13}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{13}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{13}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{13}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{13}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3\,h_{13}\,\Omega''[t]}{\Omega[t]^3}$
23	$-\frac{\partial_0\partial_0 h_{23}}{2\,\Omega[t]^2}+\frac{\partial_1\partial_1 h_{23}}{2\,\Omega[t]^2}+\frac{\partial_2\partial_2 h_{23}}{2\,\Omega[t]^2}+\frac{\partial_3\partial_3 h_{23}}{2\,\Omega[t]^2}+\frac{\partial_0 h_{23}\,\Omega'[t]}{\Omega[t]^3}-\frac{2\,h_{23}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3\,h_{23}\,\Omega''[t]}{\Omega[t]^3}$

Ω = 1/Ht

J=0, R=-1, P=1/2

00	$2\,H^2\,h_{00}-\frac{h}{2\,t^2}-H^2\,t\,\partial_0 h_{00}-\frac{\partial_0\partial_0 h}{4}+\frac{\partial_1\partial_1 h}{4}+\frac{\partial_2\partial_2 h}{4}+$ $t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{00}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{00}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{00}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{00}\right)+\frac{\partial_3\partial_3 h}{4}$
11	$4\,H^2\,h_{11}+\frac{3\,h}{2\,t^2}-H^2\,t\,\partial_0 h_{11}-\frac{\partial_0 h}{t}+\frac{\partial_0\partial_0 h}{4}-\frac{\partial_1\partial_1 h}{4}-\frac{\partial_2\partial_2 h}{4}+$ $t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{11}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{11}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{11}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{11}\right)-\frac{\partial_3\partial_3 h}{4}$
22	$4\,H^2\,h_{22}+\frac{3\,h}{2\,t^2}-H^2\,t\,\partial_0 h_{22}-\frac{\partial_0 h}{t}+\frac{\partial_0\partial_0 h}{4}-\frac{\partial_1\partial_1 h}{4}-\frac{\partial_2\partial_2 h}{4}+$ $t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{22}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{22}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{22}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{22}\right)-\frac{\partial_3\partial_3 h}{4}$
33	$4\,H^2\,h_{33}+\frac{3\,h}{2\,t^2}-H^2\,t\,\partial_0 h_{33}-\frac{\partial_0 h}{t}+\frac{\partial_0\partial_0 h}{4}-\frac{\partial_1\partial_1 h}{4}-\frac{\partial_2\partial_2 h}{4}+$ $t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{33}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{33}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{33}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{33}\right)-\frac{\partial_3\partial_3 h}{4}$
01	$3\,H^2\,h_{01}-H^2\,t\,\partial_0 h_{01}-\frac{\partial_1 h}{2\,t}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{01}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{01}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{01}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{01}\right)$
02	$3\,H^2\,h_{02}-H^2\,t\,\partial_0 h_{02}-\frac{\partial_2 h}{2\,t}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{02}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{02}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{02}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{02}\right)$
03	$3\,H^2\,h_{03}-H^2\,t\,\partial_0 h_{03}-\frac{\partial_3 h}{2\,t}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{03}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{03}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{03}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{03}\right)$
12	$4\,H^2\,h_{12}-H^2\,t\,\partial_0 h_{12}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{12}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{12}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{12}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{12}\right)$
13	$4\,H^2\,h_{13}-H^2\,t\,\partial_0 h_{13}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{13}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{13}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{13}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{13}\right)$
23	$4\,H^2\,h_{23}-H^2\,t\,\partial_0 h_{23}+t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{23}+\frac{1}{2}H^2\,\partial_1\partial_1 h_{23}+\frac{1}{2}H^2\,\partial_2\partial_2 h_{23}+\frac{1}{2}H^2\,\partial_3\partial_3 h_{23}\right)$