$$\Big\{ -\frac{1}{2}\, \mathcal{A}_j{}^{b1c}\, \pi_{\mathcal{A}bb1}{}^{c1}\, b_i{}^a\, \hat{\gamma}_{ac1}\, \hat{\gamma}_{a1c}\, h_k{}^{a1}\, n^b +$$

$$\frac{1}{2}\, \mathcal{A}_i{}^{b1c}\, \pi_{\mathcal{A}bb1}{}^{c1}\, b_j{}^a\, \hat{\gamma}_{ac1}\, \hat{\gamma}_{a1c}\, h_k{}^{a1}\, n^b -$$

$$\frac{1}{2}\, \mathcal{A}_{ja}{}^c\, \pi_{\mathcal{A}ib1}{}^{c1}\, b^{aa1}\, \hat{\gamma}_{a1c1}\, \hat{\gamma}_{bc}\, h_k{}^b\, n^{b1} +$$

$$\frac{1}{2}\, \mathcal{A}_{ia}{}^c\, \pi_{\mathcal{A}jb1}{}^{c1}\, b^{aa1}\, \hat{\gamma}_{a1c1}\, \hat{\gamma}_{bc}\, h_k{}^b\, n^{b1} -$$

$$\frac{1}{2}\, \mathcal{A}_b{}^{cc1}\, \pi_{\mathcal{A}b1c}{}^d\, b_j{}^a\, \hat{\gamma}_{ad}\, \hat{\gamma}_{a1c1}\, h_k{}^{a1}\, n^b\, n^{b1}\, n_i +$$

$$\frac{1}{2}\, \mathcal{A}_{ab1}{}^{c1}\, \pi_{\mathcal{A}jc}{}^d\, b^{aa1}\, \hat{\gamma}_{a1d}\, \hat{\gamma}_{bc1}\, h_k{}^b\, n^{b1}\, n^c\, n_i +$$

$$\frac{1}{2}\, \mathcal{A}_b{}^{cc1}\, \pi_{\mathcal{A}b1c}{}^d\, b_i{}^a\, \hat{\gamma}_{ad}\, \hat{\gamma}_{a1c1}\, h_k{}^{a1}\, n^b\, n^{b1}\, n_j -$$

$$\frac{1}{2}\, \mathcal{A}_{ab1}{}^{c1}\, \pi_{\mathcal{A}ic}{}^d\, b^{aa1}\, \hat{\gamma}_{a1d}\, \hat{\gamma}_{bc1}\, h_k{}^b\, n^{b1}\, n^c\, n_j +$$

$$\frac{1}{2}\, \mathcal{A}_j{}^{cc1}\, \pi_{\mathcal{A}b1c}{}^d\, b_i{}^a\, \hat{\gamma}_{ad}\, \hat{\gamma}_{bc1}\, h^{a1b}\, n_{a1}\, n^{b1}\, n_k -$$

$$\frac{1}{2}\, \mathcal{A}_i{}^{cc1}\, \pi_{\mathcal{A}b1c}{}^d\, b_j{}^a\, \hat{\gamma}_{ad}\, \hat{\gamma}_{bc1}\, h^{a1b}\, n_{a1}\, n^{b1}\, n_k +$$

$$\frac{1}{2}\, \mathcal{A}_{ja}{}^{c1}\, \pi_{\mathcal{A}ic}{}^d\, b^{aa1}\, \hat{\gamma}_{a1d}\, \hat{\gamma}_{b1c1}\, h^{bb1}\, n_b\, n^c\, n_k -$$

$$\frac{1}{2}\, \mathcal{A}_{ia}{}^{c1}\, \pi_{\mathcal{A}jc}{}^d\, b^{aa1}\, \hat{\gamma}_{a1d}\, \hat{\gamma}_{b1c1}\, h^{bb1}\, n_b\, n^c\, n_k +$$

$$\frac{1}{2}\, \mathcal{A}_{b1}{}^{c1d}\, \pi_{\mathcal{A}cc1}{}^{d1}\, b_j{}^a\, \hat{\gamma}_{ad1}\, \hat{\gamma}_{bd}\, h^{a1b}$$

$$n_{a1}\, n^{b1}\, n^c\, n_i\, n_k - \frac{1}{2}\, \mathcal{A}_{ac}{}^d\, \pi_{\mathcal{A}jc1}{}^{d1}\, b^{aa1}$$

$$\hat{\gamma}_{a1d1}\, \hat{\gamma}_{b1d}\, h^{bb1}\, n_b\, n^c\, n^{c1}\, n_i\, n_k -$$

$$\frac{1}{2}\, \mathcal{A}_{b1}{}^{c1d}\, \pi_{\mathcal{A}cc1}{}^{d1}\, b_i{}^a\, \hat{\gamma}_{ad1}\, \hat{\gamma}_{bd}\, h^{a1b}$$

$$n_{a1}\, n^{b1}\, n^c\, n_j\, n_k + \frac{1}{2}\, \mathcal{A}_{ac}{}^d\, \pi_{\mathcal{A}ic1}{}^{d1}\, b^{aa1}$$

$$\hat{\gamma}_{a1d1}\, \hat{\gamma}_{b1d}\, h^{bb1}\, n_b\, n^c\, n^{c1}\, n_j\, n_k +$$

$$\frac{1}{2}\, \pi_{\mathcal{A}ja1}{}^c\, \hat{\gamma}_{ab1}\, \hat{\gamma}_{bc}\, h_k{}^a\, n^{a1}\, \partial^{b1} b_i{}^b -$$

$$\frac{1}{2}\, \pi_{\mathcal{A}ia1}{}^c\, \hat{\gamma}_{ab1}\, \hat{\gamma}_{bc}\, h_k{}^a\, n^{a1}\, \partial^{b1} b_j{}^b -$$

$$\frac{1}{2}\, b_j{}^a\, \hat{\gamma}_a{}^{b1}\, \hat{\gamma}_{a1}{}^c\, h_k{}^{a1}\, n^b\, \partial_c \pi_{\mathcal{A}ibb1} +$$

$$\frac{1}{2}\, b_i{}^a\, \hat{\gamma}_a{}^{b1}\, \hat{\gamma}_{a1}{}^c\, h_k{}^{a1}\, n^b\, \partial_c \pi_{\mathcal{A}jbb1} -$$

$$\frac{1}{2}\, \pi_{\mathcal{A}jb}{}^{c1}\, \hat{\gamma}_{ac}\, \hat{\gamma}_{b1c1}\, h_k{}^a\, n^{a1}\, n^b\, n_i\, \partial^c b_{a1}{}^{b1} +$$

$$\frac{1}{2}\, \pi_{\mathcal{A}ib}{}^{c1}\, \hat{\gamma}_{ac}\, \hat{\gamma}_{b1c1}\, h_k{}^a\, n^{a1}\, n^b\, n_j\, \partial^c b_{a1}{}^{b1} -$$

$$\frac{1}{2}\, \pi_{\mathcal{A}jb}{}^{c1}\, \hat{\gamma}_{a1c}\, \hat{\gamma}_{b1c1}\, h^{aa1}\, n_a\, n^b\, n_k\, \partial^c b_i{}^{b1} +$$

$$\frac{1}{2}\, \pi_{\mathcal{A}ib}{}^{c1}\, \hat{\gamma}_{a1c}\, \hat{\gamma}_{b1c1}\, h^{aa1}\, n_a\, n^b\, n_k\, \partial^c b_j{}^{b1} +$$

$$\frac{1}{2}\, b_j{}^a\, \hat{\gamma}_a{}^c\, \hat{\gamma}_b{}^{c1}\, h^{a1b}\, n_{a1}\, n^{b1}\, n_k\, \partial_{c1} \pi_{\mathcal{A}ib1c} -$$

$$\frac{1}{2}\, b_i{}^a\, \hat{\gamma}_a{}^c\, \hat{\gamma}_b{}^{c1}\, h^{a1b}\, n_{a1}\, n^{b1}\, n_k\, \partial_{c1} \pi_{\mathcal{A}jb1c} +$$

$$\frac{1}{2}\, \pi_{\mathcal{A}jb1}{}^d\, \hat{\gamma}_{a1c1}\, \hat{\gamma}_{cd}\, h^{aa1}\, n_a\, n^b$$

$$n^{b1}\, n_i\, n_k\, \partial^{c1} b_b{}^c - \frac{1}{2}\, \pi_{\mathcal{A}ib1}{}^d\, \hat{\gamma}_{a1c1}$$

$$\hat{\gamma}_{cd}\, h^{aa1}\, n_a\, n^b\, n^{b1}\, n_j\, n_k\, \partial^{c1} b_b{}^c -$$

$$\frac{1}{2}\, \pi_{\mathcal{A}jb}{}^d\, b_i{}^a\, \hat{\gamma}_{ad}\, \hat{\gamma}_{a1c1}\, h^{bb1}\, h_k{}^{a1}\, n^c\, \partial^{c1} b_{cb1} +$$

$$\frac{1}{2}\, \pi_{\mathcal{A}ib}{}^d\, b_j{}^a\, \hat{\gamma}_{ad}\, \hat{\gamma}_{a1c1}\, h^{bb1}\, h_k{}^{a1}\, n^c\, \partial^{c1} b_{cb1} +$$

$$\frac{1}{2}\, \pi_{\mathcal{A}jc1}{}^{d1}\, b_i{}^a\, \hat{\gamma}_{ad1}\, \hat{\gamma}_{a1d}\, h^{bb1}\, h_k{}^{a1}\, n_b\, n^c$$

$$n^{c1}\, \partial^d b_{cb1} - \frac{1}{2}\, \pi_{\mathcal{A}ic1}{}^{d1}\, b_j{}^a\, \hat{\gamma}_{ad1}\, \hat{\gamma}_{a1d}\, h^{bb1}$$

$$h_k{}^{a1}\, n_b\, n^c\, n^{c1}\, \partial^d b_{cb1} + \frac{1}{2}\, \pi_{\mathcal{A}bc1}{}^{d1}\, b_j{}^a$$

$$\hat{\gamma}_{ad1}\, \hat{\gamma}_{a1d}\, h^{bb1}\, h_k{}^{a1}\, n^c\, n^{c1}\, n_i\, \partial^d b_{cb1} -$$

$$\frac{1}{2}\, \pi_{\mathcal{A}bc1}{}^{d1}\, b_i{}^a\, \hat{\gamma}_{ad1}\, \hat{\gamma}_{a1d}\, h^{bb1}\, h_k{}^{a1}\, n^c$$

$$n^{c1}\, n_j\, \partial^d b_{cb1} + \frac{1}{2}\, \pi_{\mathcal{A}jb1}{}^{d1}\, b_i{}^a\, \hat{\gamma}_{ad1}\, \hat{\gamma}_{bd}$$

$$h^{a1b}\, h^{b1c}\, n_{a1}\, n^{c1}\, n_k\, \partial^d b_{c1c} - \frac{1}{2}\, \pi_{\mathcal{A}ib1}{}^{d1}$$

$$b_j{}^a\, \hat{\gamma}_{ad1}\, \hat{\gamma}_{bd}\, h^{a1b}\, h^{b1c}\, n_{a1}\, n^{c1}\, n_k\, \partial^d b_{c1c} -$$

$$\frac{1}{2}\, \pi_{\mathcal{A}jd}{}^e\, b_i{}^a\, \hat{\gamma}_{ae}\, \hat{\gamma}_{cd1}\, h^{a1b}\, h^{b1c}\, n_{a1}\, n_{b1}$$

$$n^{c1}\, n^d\, n_k\, \partial^{d1} b_{c1b} + \frac{1}{2}\, \pi_{\mathcal{A}id}{}^e\, b_j{}^a\, \hat{\gamma}_{ae}\, \hat{\gamma}_{cd1}$$

$$h^{a1b}\, h^{b1c}\, n_{a1}\, n_{b1}\, n^{c1}\, n^d\, n_k\, \partial^{d1} b_{c1b} -$$

$$\frac{1}{2}\, \pi_{\mathcal{A}b1d}{}^e\, b_j{}^a\, \hat{\gamma}_{ae}\, \hat{\gamma}_{bd1}\, h^{a1b}\, h^{b1c}\, n_{a1}$$

$$n^{c1}\, n^d\, n_i\, n_k\, \partial^{d1} b_{c1c} + \frac{1}{2}\, \pi_{\mathcal{A}b1d}{}^e\, b_i{}^a\, \hat{\gamma}_{ae}$$

$$\hat{\gamma}_{bd1}\, h^{a1b}\, h^{b1c}\, n_{a1}\, n^{c1}\, n^d\, n_j\, n_k\, \partial^{d1} b_{c1c} \Big\}$$