

$$\begin{aligned}
& 2 \left( S^a \left( - \left( \nabla_a f^b + \nabla^b f_a \right) \nabla_c \pi_b^c + \nabla_a \pi_{bc} \nabla^c f^b \right) + \nabla^b f^a \left( \pi_{ab} \nabla_c S^c - \pi_{ac} \nabla^c S_b \right) + \right. \\
& \left. f^a \left( \left( \nabla_a S^b + \nabla^b S_a \right) \nabla_c \pi_b^c - \nabla_a \pi_{bc} \nabla^c S^b \right) + \pi_{bc} \left( \nabla_a S^c \nabla^b f^a - \nabla_a f^a \nabla^c S^b \right) \right)
\end{aligned}$$