$$
\begin{array}{ccc}
\begin{array}{l} \\ \\ \end{array} & \begin{array}{c} \\ \\ \end{array} & \begin{array}{l} \\ \\ \end{array} \\
\begin{array}{l} \\ \\ \end{array} & \begin{array}{c} \\ \\ \end{array} & \begin{array}{l} \\ \\ \end{array} \\
\begin{array}{l} \\ \\ \end{array} & \begin{array}{c} \\ \\ \end{array} & \begin{array}{l} \\ \\ \end{array}
\end{array}
$$

$$
\begin{array}{ccc}
\begin{array}{l} \\ \\ \end{array} & \begin{array}{c} \\ \\ \end{array} & \begin{array}{l} \\ \\ \end{array} \\
\begin{array}{l} \\ \\ \end{array} & \begin{array}{c} \\ \\ \end{array} & \begin{array}{l} \\ \\ \end{array} \\
\begin{array}{l} \\ \\ \end{array} & \begin{array}{c} \\ \\ \end{array} & \begin{array}{l} \\ \\ \end{array}
\end{array}
$$

$$
\begin{cases}
{}_{i}\underline{\quad}^{j} = \overline{\quad}_{i}^{j} \in \quad\quad\mathbb{R} & {}_{i}\underline{\quad}_{k}\underline{\quad}^{j} = {}_{k}\overline{\quad}_{i}^{j} \\
{}_{i}\underline{\quad}_{\lambda}\underline{\quad} = {}_{\lambda}\underline{\quad}|\overline{\quad}_{i}^{j}\,{}_{j}\quad = {}_{\lambda}\overline{\quad}_{i}^{j}\,{}_{j}\quad & {}_{i}\underline{\quad} = \overline{\quad}_{i}^{j}\,{}_{j}\quad
\end{cases}
$$

$$
\begin{cases}
{}_{i}\underline{\quad}^{j} = \overline{\quad}_{i}^{j} \in \quad\quad\mathbb{R} & {}_{i}\underline{\quad}_{k}\underline{\quad}^{j} = {}_{k}\overline{\quad}_{i}^{j} \\
{}_{i}\underline{\quad}_{\lambda}\underline{\quad} = {}_{\lambda}\underline{\quad}|\overline{\quad}_{i}^{j}\,{}_{j}\quad = {}_{\lambda}\overline{\quad}_{i}^{j}\,{}_{j}\quad & {}_{i}\underline{\quad} = \overline{\quad}_{i}^{j}\,{}_{j}\quad
\end{cases}
$$

$$
\begin{cases}
{}_{\mu}\underline{\quad}^{\nu} = \overline{\quad}_{\mu}^{\nu} \in \quad\quad\mathbb{R} & {}_{\mu}\underline{\quad}_{\lambda}\underline{\quad}^{\nu} = \overline{\quad}_{\lambda\ \mu}^{\ \nu} \\
{}_{\mu}\underline{\quad}_{\lambda}\underline{\quad} = {}_{\lambda}\underline{\quad}|\overline{\quad}_{\mu}^{\nu}\,{}_{\nu}\quad = \overline{\quad}_{\lambda\ \mu}^{\ \nu}\,{}_{\nu}\quad & {}_{\mu}\underline{\quad} = \overline{\quad}_{\mu}^{\nu}\,{}_{\nu}\quad
\end{cases}
$$

$$d\,\mathfrak{g}_{ij} = \overline{\mathfrak{e}\,\mathfrak{g}}_{i}\,\mathfrak{h}^{k}\,\mathfrak{g}_{kj} + \overline{\mathfrak{e}\,\mathfrak{g}}_{j}\,\mathfrak{h}^{k}\,\mathfrak{g}_{ki} \text{ metric}$$

$${}_{\lambda}\mathfrak{e}\,|\,d\,\mathfrak{g}_{ij} = d_{\widehat{\lambda\mathfrak{e}}}\; {}_{i}\mathfrak{e} \,\text{⧗}\, {}_{j}\mathfrak{e} = \underbrace{d_{\widehat{\lambda\mathfrak{e}}}\; {}_{i}\mathfrak{e}} \,\text{⧗}\, {}_{j}\mathfrak{e} + {}_{i}\mathfrak{e} \,\text{⧗}\, d_{\widehat{\lambda\mathfrak{e}}}\; {}_{j}\mathfrak{e} =$$

$$\overline{\mathfrak{e}\,\mathfrak{g}}_{i}\,\mathfrak{h}^{k}_{\lambda}\; {}_{k}\mathfrak{e} \,\text{⧗}\, {}_{j}\mathfrak{e} + {}_{i}\mathfrak{e} \,\text{⧗}\, \overline{\mathfrak{e}\,\mathfrak{g}}_{j}\,\mathfrak{h}^{k}_{\lambda}\; {}_{k}\mathfrak{e} = \overline{\mathfrak{e}\,\mathfrak{g}}_{i}\,\mathfrak{h}^{k}_{\lambda}\,\mathfrak{g}_{kj} + \mathfrak{g}_{ik}\,\overline{\mathfrak{e}\,\mathfrak{g}}_{j}\,\mathfrak{h}^{k}_{\lambda} =$$

$$\underbrace{{}_{\lambda}\mathfrak{e}\,|\,\overline{\mathfrak{e}\,\mathfrak{g}}_{i}\,\mathfrak{h}^{k}}\,\mathfrak{g}_{kj} + \mathfrak{g}_{ik}\,\underbrace{{}_{\lambda}\mathfrak{e}\,|\,\overline{\mathfrak{e}\,\mathfrak{g}}_{j}\,\mathfrak{h}^{k}}$$

$$d\,\mathfrak{h}^{mn} = -\,\mathfrak{h}^{mi}\,\underbrace{d\,\mathfrak{g}_{ij}}\,\mathfrak{h}^{jn} = -\,\mathfrak{h}^{mk}\,\overline{\mathfrak{e}\,\mathfrak{g}}_{k}\,\mathfrak{h}^{n} - \mathfrak{h}^{nk}\,\overline{\mathfrak{e}\,\mathfrak{g}}_{k}\,\mathfrak{h}^{m}$$

$$0 = d\,\underbrace{\mathfrak{g}_{ij}\,\mathfrak{h}^{jn}} = \underbrace{d\,\mathfrak{g}_{ij}}\,\mathfrak{h}^{jn} + \mathfrak{g}_{ij}\,d\,\underbrace{\mathfrak{h}^{jn}} \Longrightarrow$$

$$d\,\mathfrak{h}^{mn} = \mathfrak{h}^{mi}\,\mathfrak{g}_{ij}\,\underbrace{d\,\mathfrak{h}^{jn}} = -\,\mathfrak{h}^{mi}\,\underbrace{d\,\mathfrak{g}_{ij}}\,\mathfrak{h}^{jn} =$$

$$-\,\mathfrak{h}^{mi}\,\overline{\mathfrak{e}\,\mathfrak{g}}_{i}\,\mathfrak{h}^{k}\,\mathfrak{g}_{kj}\,\mathfrak{h}^{jn} - \mathfrak{h}^{mi}\,\mathfrak{g}_{ik}\,\overline{\mathfrak{e}\,\mathfrak{g}}_{j}\,\mathfrak{h}^{k}\,\mathfrak{h}^{jn} = -\,\mathfrak{h}^{mi}\,\overline{\mathfrak{e}\,\mathfrak{g}}_{i}\,\mathfrak{h}^{n} - \overline{\mathfrak{e}\,\mathfrak{g}}_{j}\,\mathfrak{h}^{m}\,\mathfrak{h}^{jn}$$