$$^{x}(g)_{y} = {}^{x}\mathcal{E}_{g\,(0)}\,{}^{x}\mathcal{J}_{T_0\,(g)\,y}\,{}^{g^\circ\,(0)}\mathcal{E}_{y}$$

$$g = \begin{array}{c|c} a & b \\ \hline \bar{b} & \bar{a} \end{array} \implies g^\circ = \begin{array}{c|c} \overset{*}{a} & -\overset{+}{b} \\ \hline -\bar{b} & \overset{+}{a} \end{array}$$

$$^{\zeta}(g)_{\omega} \overset{\text{FOL}}{\underset{181}{=}} \mathfrak{e}^{\overset{+}{\zeta}\,\bar{b}\,a^\circ\zeta + 2\overset{*}{\omega}a^\circ\zeta - \overset{*}{\omega}a^\circ b\bar{\omega}} = \mathfrak{e}^{\overset{+}{\zeta}\,\bar{b}\,a^\circ\zeta}\,\mathfrak{e}^{2\overset{*}{\omega}a^\circ\zeta}\,\mathfrak{e}^{-\overset{*}{\omega}a^\circ b\bar{\omega}}$$

$$g\,(0) = b\,\bar{a}^\circ \implies \overline{g\,(0)} = \bar{b}\;a^\circ$$

$$\overset{+}{\zeta}\;\bar{b}\;a^\circ\,\zeta = \overset{+}{\zeta}\,\overline{g\,(0)}\zeta = \operatorname{tr}\,\overline{g\,(0)}\zeta\,\overset{+}{\zeta} = \operatorname{tr}\,\overline{g\,(0)}x = \operatorname{tr}\,\underbrace{\overline{g\,(0)}x}_{+} = \operatorname{tr}\,x\,\overbrace{g\,(0)}^{*} = x\,\mathbf{\barwedge}\,\underbrace{g\,(0)}$$

$$\mathfrak{e}^{\overset{+}{\zeta}\,\bar{b}\,a^\circ\zeta} = \mathfrak{e}^{x\,\mathbf{\barwedge}\,\underbrace{g\,(0)}} = {}^{x}\mathcal{E}_{g\,(0)}$$

$$g^\circ\,(0) = -\overset{+}{b}\;\overset{+}{a}^\circ \implies \overbrace{g^\circ\,(0)}^{+} = -a^\circ b$$

$$-\overset{*}{\omega}\;a^\circ b\,\bar{\omega} = -\operatorname{tr}\;\bar{\omega}\;\overset{*}{\omega}\;a^\circ b = \operatorname{tr}\;\overset{*}{y}\;\overbrace{g^\circ\,(0)}^{+} = \operatorname{tr}\;\underbrace{\overset{*}{y}\overbrace{g^\circ\,(0)}^{+}}_{+} = \operatorname{tr}\;\underbrace{g^\circ\,(0)}\,\overset{*}{y} = \underbrace{g^\circ\,(0)}\,\mathbf{\barwedge}\,y$$

$$\mathfrak{e}^{-\overset{*}{\omega}a^\circ b\bar{\omega}} = \mathfrak{e}^{\underbrace{g^\circ\,(0)}\,\mathbf{\barwedge}\,y} = {}^{g^\circ\,(0)}\mathcal{E}_{y}$$

$$T_0\,(g)\,y = \overbrace{z\overset{*}{b} + \overset{*}{a}}^{\circ}\;y\;\overbrace{\bar{b}z + \bar{a}}^{\circ}$$

$$\overset{*}{\omega}\;a^\circ\zeta = \operatorname{tr}\,\zeta\,\overset{*}{\omega}\;a^\circ = <\zeta|\,\overset{*}{a}^\circ\omega>$$

$$\overset{*}{a}^\circ\omega\;\overbrace{\overset{*}{a}^\circ\omega}^{+} = \overset{*}{a}^\circ\omega\,\overset{+}{\omega}\;\bar{a}^\circ = \overset{*}{a}^\circ y\,\bar{a}^\circ = T_0\,(g)\,y$$

$$\int_{dH}^{{}^{\ell}\mathbb{R}_{\ell}^{\mho}} \mathfrak{e}^{2\overset{*}{\omega}a^\circ\zeta[H]} = \int_{dH}^{{}^{\ell}\mathbb{R}_{\ell}^{\mho}} \mathfrak{e}^{2\,<\,\zeta[H]|\overset{*}{a}^\circ\omega\,>} = {}^{\zeta\overset{+}{\zeta}}\mathcal{J}_{\overset{*}{a}^\circ\omega\overset{+}{\omega}\bar{a}^\circ} = {}^{x}\mathcal{J}_{T_0\,(g)\,y}$$

$$\text{LHS} = \int_{dH}^{{}^{\ell}\mathbb{R}_{\ell}^{\mho}} {}^{\zeta[H]}(g)_{\omega} = \mathfrak{e}^{\overset{+}{\zeta}\,\bar{b}\,a^\circ\zeta}\,\mathfrak{e}^{-\overset{*}{\omega}a^\circ b\bar{\omega}} \int_{dH}^{{}^{\ell}\mathbb{R}_{\ell}^{\mho}} \mathfrak{e}^{2\overset{*}{\omega}a^\circ\zeta[H]} = \text{RHS}$$