$\sigma_{\xi}(v_b^{1,2}) \in (V(\mathcal{S}_a^3) \setminus \{\kappa_a^3\}) \cup (V(\mathcal{S}_b^3) \setminus \{\kappa_b^3\}) \text{ and} \sigma_{\xi}(v_b^{1,2}) \in V(\mathcal{K}^3)$