$C'$.

$\ulcorner$ Let $C \cap C'_\lambda = (\sigma'_\lambda = 0)$ and $(\tau = 0) = p$, where $\sigma'_\lambda$ $\tau$ section of some bundles of $C$.

$\Rightarrow$ $\{\sigma'_\lambda \otimes \tau^{-1}\}$ is a pencil on $C$ of degree 3.

$\Rightarrow$ It gives a 3-sheeted cover $C$ of $\mathbb{P}^1$.

$\Rightarrow$ By the Riemann-Hurwitz formula, by P.255

$$b = 2g(C) - 2 + 3 \cdot \chi(\mathbb{P}^1)$$
$$= -2 + 6 = 4 = \# \text{ of branch points.}$$

Note, here: $\{\sigma'_\lambda \otimes \tau^{-1} = 0\}$ has no base point for, since $\{C'_\lambda\}$ is a generic pencil, and choose $C'_{\lambda^0} \cap C = \{p, q_1, q_2, q_3\}$ where $C' \cap C = \{p, p_1, p_2, p_3\}$ $p_i \neq q_j$.

Since, if $\lambda_0$ is a branch point, then $C'_{\lambda_0}$ is tangent to $C$, the pencil $\{C'_\lambda\}$ can contain at most $b$ conics tangent to $C$ other than $C'$. $\lrcorner$

It follows that $H_p$ is the tangent plane to $V_C$ at $C'$, and conversely if $C'$ is simply tangent to $C$ at only one point, then $C'$ is a smooth point of $V_C$.

$\ulcorner$ Since $C$ is a smooth point of $V_C$, by Bertini's theorem applied to the smooth locus $V_C^*$ of $V_C$,