(a) $q' \notin R$.

$\Rightarrow$ By the argument above P987 ~ P988 note, we can show that $\overline{p_L, q'} = \overline{p_{L'}, q'}$. $\Rightarrow$ $q' \in \overline{p_L p_{L'}} \cap \check{S}$

$\Rightarrow$ h is tangent to $\check{S}$ at q'.

(b) $q' \in R$

~~h is tangent to $\check{S}$ at q' since q' is a double point.~~

$\sigma(q') \cap X = \sigma(q', \tilde{h})$ $\Rightarrow$ $\overline{p_L, q'}$, $\overline{p_{L'}, q'} \in \sigma(q', \tilde{h})$ since $\overline{p_L, q'} \in \sigma(p_L, h) \subset X$, and $\overline{p_L, q'} \in \sigma(q')$. similarly for $\overline{p_{L'}, q'}$. $\Rightarrow$ $\tilde{h}$ contains p_L, $p_{L'}$, and q' $\Rightarrow$ If we assume $p_L \neq p_{L'}$, and $\overline{p_L, q'} \neq \overline{p_{L'}, q'}$, then $\tilde{h} = h$ since $h \ni p_L, p_{L'}, q'$. $\Rightarrow$ $\sigma(q') \cap X = \sigma(q', h)$.

$\Rightarrow$ L or L' is equal to $\sigma(q', h)$ $\Rightarrow$ p_L or $p_{L'}$ is equal to q'. $\Rightarrow$ Contradiction. $\Rightarrow$ q' can not be an element of R.

" For L, L' nonspecial, $h_L \cap \check{S}$ is a quartic with one ordinary double point."

" Lemma : Suppose $p_1, p_2 \notin R$ and $T_{p_i}(\check{S}) = h_i \notin R^*$.
Then $h_1 \neq h_2$.

Proof) If $h_1 = h_2$, by the argument on P766 ~ P767, $p_1^* = T_{h_1}(\check{S}^*) = T_{h_2}(\check{S}^*) = p_2^*$. $\Rightarrow$ $p_1 = p_2$ $\Rightarrow$ Contradiction.
Thus $p_1 \neq p_2$ $\Rightarrow$ $h_1 \neq h_2$

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