NO.
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$$\begin{pmatrix} a_1 \\ a_2 \\ a_3 \\ a_4 \\ a_0 \end{pmatrix} \longmapsto \begin{pmatrix} x_1^0, & x_2^0, & x_3^0, & x_4^0, & -1 \\ \xi_1^1, & \xi_2^1, & \xi_3^1, & \xi_4^1, & 0 \\ \xi_1^2, & \xi_2^2, & \xi_3^2, & \xi_4^2, & 0 \\ \xi_1^3, & \xi_2^3, & \xi_3^3, & \xi_4^3, & 0 \end{pmatrix} \begin{pmatrix} a_1 \\ a_2 \\ a_3 \\ a_4 \\ a_0 \end{pmatrix}$$

$\Rightarrow$ Since rank $L = 4$ ($\because$ ξ^1, ξ^2, ξ^3, x^0 are linearly independent), $\ker L$ has dimension 1.
Suppose $\{(a_1, \cdots a_0) \mid \xi_1^3 a_1 + \cdots + a_4 \xi_4^3 = 0\} \supset K$.
This implies that the map $L' : \mathbb{C}^5 \to \mathbb{C}^3$ defined by

$$\begin{pmatrix} a_1 \\ a_2 \\ a_3 \\ a_4 \\ a_0 \end{pmatrix} \longmapsto \begin{pmatrix} x_1^0, & x_2^0, & x_3^0, & x_4^0, & -1 \\ \xi_1^1, & \xi_2^1, & \xi_3^1, & \xi_4^1, & 0 \\ \xi_1^2, & \xi_2^2, & \xi_3^2, & \xi_4^2, & 0 \end{pmatrix} \begin{pmatrix} a_1 \\ a_2 \\ a_3 \\ a_4 \\ a_0 \end{pmatrix}$$

has $\ker L$ of dim 2, and $\underset{\overset{\parallel}{K}}{\ker L'} \subset \ker L$, which is absurd.

"More explanations on p208."

For example $N = 5-1$ $M \subset \mathbb{P}^{5-1}$
$(x_1, \cdot x_4) = x$, $y = (y_1 \cdots y_4)$ assum-ing $x, y \in U_0$
Let $K = \{(a_0, a_1 \cdots a_4) \mid a_1 x_1 + \cdots + a_4 x_4 = a_0,\ a_1 y_1 + \cdots + a_4 y_4 = a_0\}$
K is identified with $\{(a_1 \cdots a_4) \mid (a_1 \cdots a_4) \cdot (x - y) = 0$
i.e. $a_1(x_1 - y_1) + \cdots + a_4(x_4 - y_4) = 0\}$.
Let $T_x' M = A$. $T_y' M = B$. Suppose $\dim A = \dim B \geq 2$.
$\Rightarrow$ Consider. $K - (A^\perp \cup B^\perp) \subset \mathbb{C}^4$, where

$A^\perp = \{(a_1, \cdots a_4) ;\ a_1 x_1' + a_2 x_2' + \cdots + a_4 x_4' = 0$ for all $x' \in T_x' M\}$