above line 11 on Proof, $\exists$ a smooth hyperplane section, since we can find a point $y \in M$ s.t $\overline{x, y} \ni v$.

We will prove the surjectiveness by experimenting an example.

Let $\dim M = 2$. $\dim E_x = 2$.

$T_x^{*\prime} M = \langle \omega_1, \omega_2 \rangle$. $E_x = \langle e_1, e_2 \rangle$

Since $\dim (T_x^{*\prime} V \otimes E_x) = 2$, and the natural projection $T_x^{*\prime} M \otimes E_x \longrightarrow T_x^{*\prime} V \otimes E_x$ is surjective, at least dim. of the image of d is 2.

Suppose $\dim \operatorname{im} d \neq 4$. $\Rightarrow \exists$ a smooth hyperplane section V s.t the natural projection $T_x^{*\prime}(M) \otimes E_x \to T_x^{*\prime}(V) \otimes E_x$ is not onto.

Suppose $\operatorname{im} d = \langle \omega_1 \otimes e_1 + \omega_2 \otimes e_2, \ \omega_2 \otimes e_1 + \omega_1 \otimes e_2 \rangle$.

$\Rightarrow \exists$ a hyperplane section V s.t $T_x' V = \langle u_1 + u_2 \rangle$ where $\langle u_1 \rangle = \ker \omega_2$ $\ker \omega_1 = \langle u_2 \rangle$.

Let $\tau : T_x' V \longrightarrow E_x$ be a map defined by

$$\tau (u_1 + u_2) = 2 e_1 + e_2 .$$

$\Rightarrow$ We have $\sigma \in H^0(M. \mathcal{J}_x(E))$ s.t

$$d\sigma = a \omega_1 \otimes e_1 + a \omega_2 \otimes e_2 + b \omega_2 \otimes e_1 + b \omega_1 \otimes e_2$$

(Without loss of generality, assume that $\omega_i(u_j) = \delta_{ij}$.)

s.t $d\sigma |_V = \tau$.

$$d\sigma(u_1 + u_2) = a e_1 + a e_2 + b e_1 + b e_2$$
$$= (a+b) e_1 + (a+b) e_2 \neq \tau(u_1 + u_2) = 2 e_1 + e_2$$