No.
year month day ( )

Thus if we have a smaller subspace $W' \subset W$, then $\exists$ $w_0 \in W - W'$. Let w_0^* be a dual basis element.
$\Rightarrow$ $w_0^*(w_0) = 1$. $\Rightarrow$ $w_0^* \notin \Lambda^\perp = \{ v^* \in V^* : i(v^*)\Lambda = 0 \}$
$\Rightarrow$ $i(w_0^*)\Lambda \neq 0$. $\Rightarrow$ Λ is not in the image of $\Lambda^k W' \longrightarrow \Lambda^k V$. More precisely,
$W = \mathrm{Ann}(\Lambda^\perp) = \{ v \in V : v^*(v) = 0 \text{ for all } v^* \in \Lambda^\perp \}$
$W \supset W'$ $w_0 \in W - W'$ $\Rightarrow$ Suppose $w_0^* \in \Lambda^\perp$.
$\Rightarrow$ $w_0^*(w_0) = 0$ since $w_0^* = 0$ on $W \supset W'$.
$\Rightarrow$ We can conclude that W is the minimal subspace. ⅃

We now define $W' = \{ w \in W : w \wedge \Lambda = 0 \}$.
If Λ is decomposable, then clearly $W' = W$.
⌜ If Λ is decomposable, $\Lambda = v_1 \wedge \cdots \wedge v_k$. $\Rightarrow$ $W' \supset \langle v_1, \cdots v_k \rangle$, and $\dim W = k$. $\Rightarrow$ $W = W'$ (Remember $v_1, \cdots v_k \in W$. ⅃
Conversely, if Λ is not decomposable so that $\dim W = l > k$, then since the pairing $\Lambda^k W \otimes \Lambda^{l-k} W \longrightarrow \Lambda^l W$ is nondegenerate we deduce that $W' \neq W$. So Λ is decomposable $\Leftrightarrow$ $W = W'$.

⌜ Clearly, $\Lambda^k W \otimes \Lambda^{l-k} W \longrightarrow \Lambda^l W$ is nondegenerate, given $a \in \Lambda^k W$, $a = \sum a_I e_I$
$\sum a_I \, e_{i_1} \wedge \cdots \wedge e_{i_k}$, assume $a_I \neq 0$, $\Rightarrow$ Consider e_{I°, $I^\circ = \{1, \cdots l\} - I$.
$a \wedge e_{I^\circ} = \pm a_I \, e_1 \wedge \cdots \wedge e_l$, where $W = \langle e_1, e_2, \cdots e_l \rangle$.
This implies that $\exists$ $w_0 \in W$ s.t $\Lambda \wedge w_0 \neq 0$, since $\Lambda \in \Lambda^k W$. $\Rightarrow$ $W \neq W'$. Here we used the fact above that $l \geq k$ with equality holding $\Leftrightarrow$ Λ is decomposable. ⅃