DATE . . PAGE

$2kt\,\tilde{P}(\eta\wedge\eta,\ \Theta_t, \cdots \Theta_t) = t\,k(k-1)\,\tilde{P}(\eta,\ \eta\wedge\Theta_t - \Theta_t\wedge\eta, \cdots \Theta_t \cdots).$

$\ulcorner$ (*)

$$\sum_i (-1)^{d_1+\cdots+d_{i-1}}\ P(A_1, \ldots, \theta\wedge A_i, \cdots A_k)$$

$$= \sum_i (-1)^{d_1+\cdots+d_i}\ P(A_1, \cdots, A_i\wedge\theta, \cdots A_k).$$

In case

$\Rightarrow$ $d_1 = \cdots = d_i = \cdots = 2$ $\quad A_i = \Theta_t.$ $\quad \theta = \eta$ $\quad P = \tilde{P}$

$\Rightarrow$ $P(\Theta_t, \cdots, \eta\wedge\Theta_t, \cdots \Theta_t) = P(\Theta_t, \ldots, \Theta_t\wedge\eta, \cdots \Theta_t)$

$A_1 = \eta,\quad A_2 = \cdots = A_k = \Theta_t.\quad d_1 = 1,\ d_2 = \cdots = d_k = 2\quad P = \tilde{P}$

$$\sum_i (-1)^{d_1+\cdots+d_{i-1}}\ \tilde{P}(\eta, \ldots, \eta\wedge\Theta_t, \cdots \Theta_t)$$

$$= \tilde{P}(\eta\wedge\eta,\ \Theta_t, \cdots \Theta_t) - \tilde{P}(\eta,\ \eta\wedge\Theta_t, \cdots \Theta_t)$$
$$- \tilde{P}(\eta,\ \Theta_t,\ \eta\wedge\Theta_t, \cdots \Theta_t) - \cdots$$
$$= \tilde{P}(\eta\wedge\eta,\ \Theta_t, \cdots \Theta_t) - (k-1)\,\tilde{P}(\eta,\ \eta\wedge\Theta_t, \Theta_t, \cdots \Theta_t)$$

(since $\tilde{P}$ is symmetric and Θ_t is 2-form)

$$= \sum_i (-1)^{d_1+\cdots+d_i}\ \tilde{P}(\eta, \cdots, \Theta_t\wedge\eta, \cdots \Theta_t)$$

$$= -\tilde{P}(\eta\wedge\eta,\ \Theta_t, \cdots \Theta_t) - \tilde{P}(\eta,\ \Theta_t\wedge\eta, \cdots \Theta_t) - \cdots$$

$$= -\tilde{P}(\eta\wedge\eta,\ \Theta_t, \cdots \Theta_t) - (k-1)\,\tilde{P}(\eta,\ \Theta_t\wedge\eta,\ \Theta_t, \cdots \Theta_t)$$

Thus

$2kt\,\tilde{P}(\eta\wedge\eta, \Theta_t, \cdots \Theta_t) = kt\,\big(\ (k-1)\,\tilde{P}(\eta,\ \eta\wedge\Theta_t, \cdots \Theta_t) -$