$$\Rightarrow \ker d_1 = \frac{\{a \in F^pK^{p+q} ; \ da \in d(F^{p+1}K^{p+q}) + F^{p+2}K^{p+q+1}\}}{d(F^pK^{p+q-1}) + F^{p+1}K^{p+q}}$$

$$\underline{+ \ d(F^pK^{p+q-1}) + F^{p+1}K^{p+q}}$$

Since $d(F^pK^{p+q-1}) \subset \{a \in F^pK^{p+q} ; \ da \in d(F^{p+1}K^{p+q}) + F^{p+2}K^{p+q+1}\}$, ...

$$\ker d_1 = \frac{\{a \in F^pK^{p+q} ; \ da \in d(F^{p+1}K^{p+q}) + F^{p+2}K^{p+q+1}\} + F^{p+1}K^{p+q}}{d(F^pK^{p+q-1}) + F^{p+1}K^{p+q}}.$$

Conder $[a] \in \ker d_1$ s.t $a \in F^pK^{p+q}$ and $da = dl + x$, where $l \in F^{p+1}K^{p+q}$, $x \in F^{p+2}K^{p+q+1}$.

$\Rightarrow d(a-l) = x \in F^{p+2}K^{p+q+1}$ and $a-l \in F^pK^{p+q}$.

Since $[l] \in \ker d_1$, $[l] \in \dfrac{\{a \in F^pK^{p+q} ; \ da \in F^{p+2}K^{p+q+1}\} + F^{p+1}K^{p+q}}{d(F^pK^{p+q-1}) + F^{p+1}K^{p+q}} = A$, and $[a-l] \in A$,

$[a] \in A$ ($\because$ A is abelian and $[a] = [a-l] + [l]$).

Thus $\ker d_1 \subset A \Rightarrow$ Since A is a subgr of $\ker d_1$,