agree_on_common_append[4,23]

$\forall T$:Type, as, bs, cs, ds:T List.
$(\forall x \in cs. \ \neg(x \in bs))$
$\Rightarrow (\forall x \in as. \ \neg(x \in ds))$
$\Rightarrow$ agree_on_common$(T;as;cs)$
$\Rightarrow$ agree_on_common$(T;bs;ds)$
$\Rightarrow$ agree_on_common$(T;as$ @ $bs;cs$ @ $ds)$