$$A_0 X = X B_0$$

No constraints
No conditions

PairComp
$A_0\ B_0$

$$A_0 X = X B_0$$

$X \neq B_0 X_S$
$X \neq X_P A_0$
No conditions

$$A_1 X = X A_1$$

No constraints
No conditions

$$A_1 X = X B_0$$

$X \neq X_P A_0$
$A_1 := A_0 B_0$

$$A_0 X = X A_1$$

$X \neq B_0 X_S$
$A_1 := A_0 B_0$

Pick 1

$$A_0 X = X B_0$$

$X \neq B_0 X_S$
$X \neq X_P A_0$
No conditions

BlockComp
A_0

$$A_2 = A_3 B_0$$

No constraints
$A_2 := A_0^{i_1+1}$
$A_3 := A_0^{i_1}$

$$A_2 X A_3 = A_4 X A_3 B_0$$

$X \neq \varepsilon$
$A_2 := A_0^{i_1+1}$
$A_3 := A_0^{i_2}$
$A_4 := A_0^{i_1}$