first move

1. defect

2. coop into coops and defect into defectors

3.

    CC - defect

    CD - coop

    DC - coop

    DD - defect

4.

    CCC - defect

    CCD - must be random so defect into them forever

    CDC - coop

    CDD - coop

    DCC - coop

    DCD - coop

    DDC - defect forever

    DDD - defect forever

5.

    CCCC - defect

    CCCD - must be random so defect forever

    CCDC - must be random so defect forever

    CCDD - must be random so defect forever

    CDCC - coop

    CDCD - must be R/AC so defect forever

    CDDC - coop

    CDDD - defect

    DCCC - coop

    DCCD - must be random so defect forever

    DCDC - coop

    DCDD - must be random so defect forever

    DDCC - R/AC so defect forever

    DDCD - R/AC so defect forever

    DDDC - R/Ac so defect forever

    DDDD - R/AC/D so defect forever

6.

CCCCC - must be cooperate so defect forever

CCCCD - must be TF2T so alternate C,D due to half PFL

CCCDC - must be random so defect

CCCDD- must be random so defect

CCDCC - must be random so defect

CCDCD - must be random so defect

CCDDC - must be random so defect

CCDDD - must be random so defect

CDCCC - PFL

CDCCD - must be random so defect forever

CDCDC - must be random so defect forever

CDCDD - must be random so defect forever

CDDCC - PFL

CDDCD - must be random so defect forever

CDDDC - must be random so defect forever

CDDDD - must be random or grudger so defect forever

DCCCC - PFL

DCCCD - must be random so defect forever

DCCDC - must be random so defect forever

DCCDD -must be random so defect forever

DCDCC - PFL

DCDCD - must be random so defect forever

DCDDC - must be random so defect forever

DCDDD - must be random so defect forever

DDCCC - must be random so defect forever

DDCCD - must be random so defect forever

DDCDC - must be random so defect forever

DDCDD - must be random so defect forever

DDDCC - must be random so defect forever

DDDCD - must be random so defect forever

DDDDC - must be random so defect forever

DDDDD - must be random so defect forever

All the PFLs you would continue to coop unless they break it then they are random so defect forever