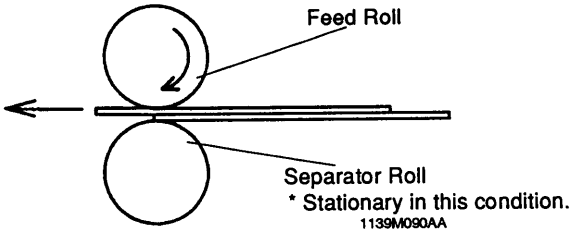
13-8-5. Manual Bypass Paper Separating Mechanism

The paper separating mechanism ensures that only the top sheet of paper is fed in by separating the second sheet of paper from the top one. This is accomplished by the Torque Limiter fitted to the Separator Roll shaft which stops the Separator Roll when there is a change in friction between the Feed and Separator Rolls.

1. At the Time of Double Feed:

The top sheet of paper is fed into the copier by the Feed Roll. Since the coefficient of friction between the top and second sheets of paper is smaller than that between the second sheet of paper and the Separator Roll, the two sheets of paper slip and the second sheet of paper is not fed into the copier. The driving force of the Feed Roll is at this time neutralized by the two slipping sheets of paper and not transmitted to the Separator Roll which is stopped by its Torque Limiter. In other words, the force of the Torque Limiter is greater than the driving force of the Feed Roll as it is transmitted through the two sheets of paper.



2. Normal Feeding:

The friction coefficient on the top side of the paper is equivalent to that on the underside. Hence, the driving force of the Feed Roll is directly transmitted to the Separator Roll through the paper, causing the Separator Roll to be turned by the Feed Roll. In other words, the force of the Torque Limiter is smaller than the driving force of the Feed Roll as it is transmitted through the paper.

