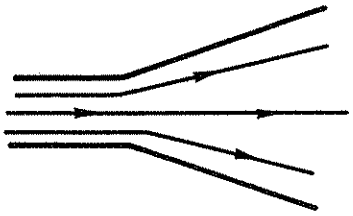
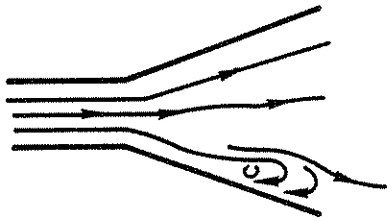
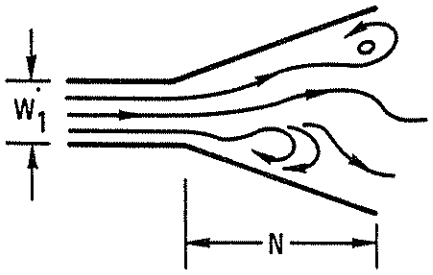
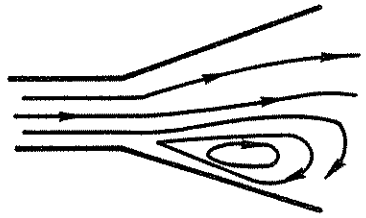
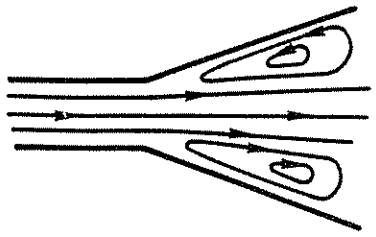
Table 7-6. Definition of Diffuser Stall Regimes.

These stall regimes apply to two-dimensional diffusers (two parallel walls and two diverging walls, Fig. 7-9. It is reasonable to believe that they apply to other diffusers. The divergence angle is exaggerated. Also see Fig. 7-7. (Refs. 7-27 through 7-29.)

Description	Characteristics
1. Unstalled 	Flow follows diffuser contours. Flow is steady.
2. Appreciable Stall 	Flow generally follows diffuser contours. Boundary layers thicken. Small regions of separation and erratic flow are generally first seen in corners and they occupy no more than 1/5 of diffuser wall. There is little or no reverse flow.
3. Large Transitory Stall 	Flow is erratic with gross oscillation of pressure and overall flow pattern. Stalled regions with reverse flow form and then wash out. $N/W_1 < 4$: stalls occur on 1 diverging wall. $4 < N/W_1 < 12$: stalls occur on both diverging walls (shown). $N/W_1 > 16$: stalls occur on parallel walls.
4. Fully Developed Stall 	Flow separates near throat and forms a large, stable, fixed eddy along one diverging wall while the flow follows second diverging wall. Near-steady flow with reverse flow in eddy. Eddy can be moved from one wall to the other wall only by large disturbances.
5. Jet Flow 	Incoming flow separates from both diffuser walls near throat and proceeds as a jet down diffuser. Large fixed eddies form on diverging walls. Flow is steady with substantial regions of reverse flow. Diffuser pressure recovery is very poor.