



**FIGURE P6-22**

Problem 6-59

†6-59 Figure P6-22 shows a fourbar toggle clamp used to hold a workpiece in place by clamping it at  $D$ .  $O_2A = 70$ ,  $O_2C = 138$ ,  $AB = 35$ ,  $O_4B = 34$ ,  $O_4D = 82$ , and  $O_2O_4 = 48$  mm. At the position shown, link 2 is at  $104^\circ$ . The linkage will toggle when link 2 reaches  $90^\circ$ .

† These problems are suited to solution using *Mathcad*, *Matlab*, or *TKSolver* equation solver programs.