

2-16. The 100 kg block is moving upward with an initial velocity $v_0 \sim N(2, 0.2^2)$ m/s. Then the motor draws through the cable with a horizontal force $F \sim N(500, 10^2)$ N. When $t = 5$ s, determine the speed of the block. Assume F and v_0 are independent.

Solution: $v \sim N(2.95, 1.02^2)$ m/s

