

Question 24637

$$m=12000 \text{ kg}, v_2=20 \text{ m/s}, v_1=16 \text{ m/s}$$

Work done on the car is the difference of kinetic energies, when car had final and initial velocity. $A = -(T_2 - T_1) = -\frac{m}{2}(v_2^2 - v_1^2) = -86400 \text{ J}$ (we obtain negative sign, because work was done on car). So, the work done on car is 86400 J .