

# Brake System Principles

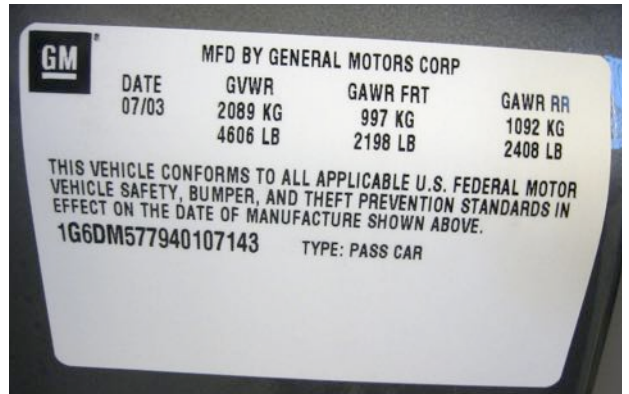
Meet NATEF Task: (None Specified)

Name \_\_\_\_\_ Date \_\_\_\_\_ Time on Task \_\_\_\_\_

Make/Model/Year \_\_\_\_\_ VIN \_\_\_\_\_ Evaluation: 4 3 2 1

The energy required to slow and/or stop a vehicle depends on two major factors:

- Weight of the vehicle
- Speed of the Vehicle



\_\_\_\_\_ 1. Check service information and determine the weight of the vehicle.

Weight = \_\_\_\_\_

\_\_\_\_\_ 2. Add the number of possible passengers (one for each location equipped with seat belts times 150 pounds each):

Number of passengers = \_\_\_\_\_ × 150 pounds = \_\_\_\_\_

\_\_\_\_\_ 3. Add possible luggage or cargo (see tire pressure decal) weight:

Luggage or cargo = \_\_\_\_\_

\_\_\_\_\_ 4. Total vehicle weight = \_\_\_\_\_

\_\_\_\_\_ 5. Using the formula, determine the kinetic energy at the following speeds:

$$\frac{\text{weight} \times \text{speed}^2}{29.9} = \text{kinetic energy}$$

30 mph = \_\_\_\_\_

60 mph = \_\_\_\_\_