Brake System Principles

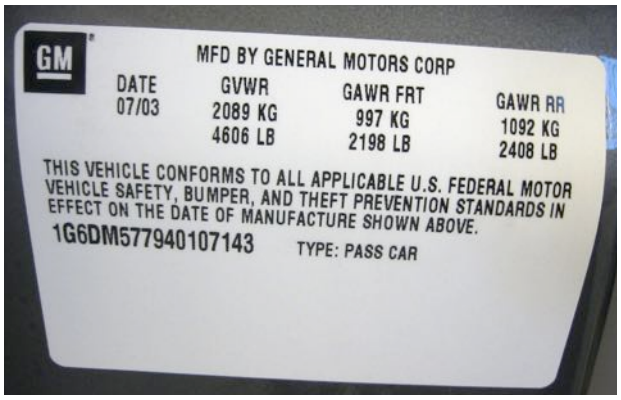
Meets NATEF Task: None Specified

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 = _____