

Brake System Principles

Meets ASE Task: Not specified by ASE

Name: _____ Date: _____ Time on Task: _____

Make/Model/Year: _____ VIN: _____

Evaluation (Enter number from 4, 3, 2, 1) : _____

- ☐ 1. The energy required to slow and/or stop a vehicle depends on two major factors:
 - ☐ Weight of the vehicle
 - ☐ Speed of the vehicle
- ☐ 2. Check service information and determine the weight of the vehicle.
Weight = _____
- ☐ 3. Add the number of possible passengers (one for each location equipped with seat belts times 150 pounds each):
Number of passengers = _____ × 150 pounds = _____
- ☐ 4. Add possible luggage or cargo (see tire pressure decal) weight:
Luggage or cargo = _____
- ☐ 5. Total vehicle weight = _____
- ☐ 6. Using the formula, determine the kinetic energy at the following speeds:

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

29.9

30 mph = _____

60 mph = _____

