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EDT 8220

Task Analysis Example

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**Task Analysis Example**

**Objective:** By the end of this 16 hour course, students will be able to properly set up a measuring station and accurately measure, weigh, and calculate the center of balance for a 2 axle vehicle.

1. **Obtain the Necessary Supplies**

## Portable scales

## Tape measure

## Weather resistant marking tape

## Permanent markers

## Calculator

## Pen and paper

### **Preparing Students for Training**

#### Review safety procedures

#### Familiarize students with equipment being used

#### Gather supplies

#### Obtain vehicle

#### Place scales on hard, flat, and level ground surface

#### Ensure the scales have been recently calibrated

#### Review process of weighing and marking vehicles and cargo

1. **Training Students to Weigh Vehicle**

#### Drive vehicle onto scales so that each wheel is centered on each scale and make sure the vehicle is empty of personnel and extra equipment.

#### Record Weight One (W1) of vehicle at front axle in pounds.

#### Record Weight Two (W2) of vehicle at rear axle in pounds.

#### To calculate the Gross Weight (GW), add W1+W2=GW.

1. **Training Students to Measure Vehicle**

#### Measure vehicle from the Reference Datum Line (RDL), located at front of vehicle, to the front axle, aka Distance 1 (D1) and record measurement in inches.

#### Measure vehicle from RDL to rear axle, Distance 2 (D2) and record measurement in inches.

**5. Training Students How to Calculate Center of Balance**

#### Compute Moment One (M1) by multiplying weight in pounds (W1) of the vehicle by the distance in inches (D1). This calculation will result in Moment One (M1).

#### Repeat the steps to calculate Moment Two (M2) using the same formula as for Moment One (M1).

#### To find the Center of Balance (C.B.)

add M1+M2

add W1+W2

C.B.= (M1+M2) / (W1+W2)

**6. Training Students How to Mark the Vehicle’s Center of Balance**

#### Mark the location of the C.B. on both sides of the vehicle using weather resistant marking tape, forming the letter “T”.

#### Using a permanent marker, write the gross weight (GW) information on the horizontal portion of the “T”.

#### Write the letters C.B. on the vertical portion of the “T” to indicate the exact position of the vehicle’s CB. Include the number of inches from the RDL/From Front End (FFE) to the CB location.

#### Example:

GW 17,530

C.B.

99”

F.F.E.

1. Using the same tape, mark the axle weights using a single strip of tape above each axle on both sides of the vehicle. (Example: FAW 6320)