Trim Height Inspection

Note: Before performing any of the following adjustment procedures, inspect the entire suspension system for worn or damaged suspension components. Replace those components before any measurements or adjustments are performed. Also check for any collision damage.

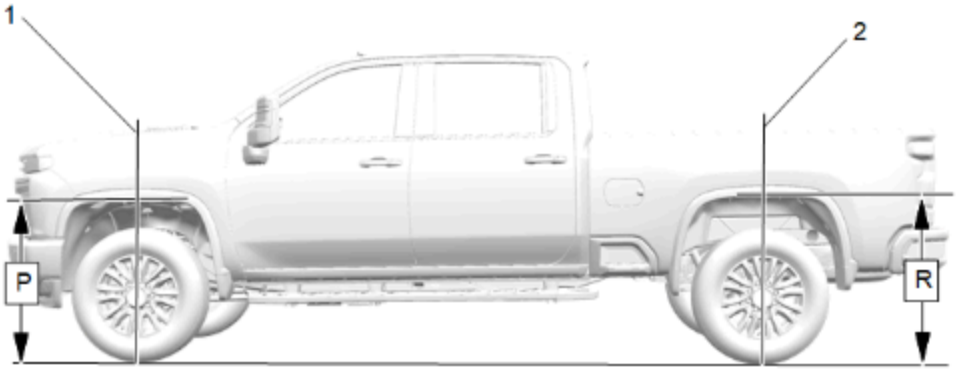
Trim Height Measurements

Trim height is a predetermined measurement relating to vehicle ride height. Incorrect trim heights can cause the vehicle to bottom over bumps, damage to the suspension components, and symptoms similar to wheel alignment problems. Check the trim heights when diagnosing suspension concerns and before checking the wheel alignment.

Perform the following before measuring the trim heights:

- Ensure the vehicle is on a level surface, such as an alignment rack.
- Set the tire pressures to the pressure shown on the certification label. Vehicle Certification, Tire Placard, and Anti-Theft Label.
- Ensure that the suspension is fully supporting the vehicle.
- Check for installed aftermarket accessories or modifications that could affect trim height measurements:
  - Tire and wheel sizes other than production
  - Lifting or lowering kits
  - Wheel Opening Flares
  - Ground Effects
- Ensure that the passenger and rear compartments are empty, except for the spare tire.
- Check the fuel level. Add additional weight if necessary to simulate a full tank of fuel. (One U.S. gallon of gasoline weighs approximately 6.5 lbs. One liter of gasoline weighs 0.70 kg.)
- Close all doors, lift gate/trunk and the hood.
- Remove the alignment rack floating pins.

Measuring the P and R Dimension



Measurement Definitions

P Height: The vertical distance from the ground to the top of the wheel opening through the center line of the front wheel (1).

R Height: The vertical distance from the ground to the top of the wheel opening through the center line of the rear wheel (2).

Use the following procedures to measure the P and R dimensions:

Note: The left and right P and R height differences should be no more than **12 mm (0.47 in)**.

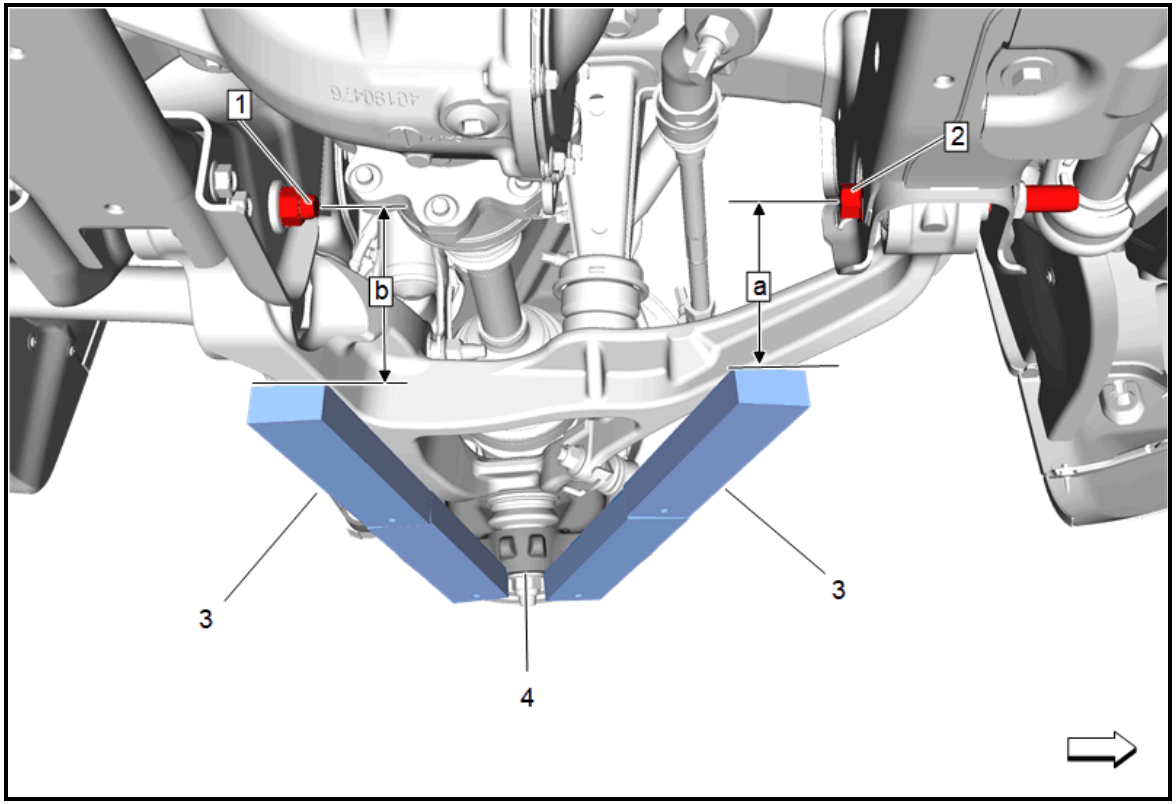
1. Push the front bumper down a minimum of **25 mm (1 in)**, and release. Perform this step three times.
2. Measure and record the trim height per the "Measurement Definitions" above.
3. Lift the bumper up a minimum of **25 mm (1 in)**, and release. Perform this step three times.
4. Measure and record the trim height per the "Measurement Definitions" above.
5. The true P height measurement is the average of the measurements taken in step 2 and 4. Trim Height Specifications
6. Repeat the above steps at the rear of the vehicle for the R heights.
7. See the trim height specifications for the modified R height measurement. Trim Height Specifications

8. If the P and R heights are outside of the specifications, measure the Z and D heights.

Z Height Measurement

The Z height dimension measurement determines the proper ride height for the front end of the vehicle. Some adjustment is possible, however, replacement of suspension components may be required.

1. Jounce the front suspension of the vehicle by pushing the vehicle down and lifting up.
2. Allow the vehicle to settle and take a measurement.

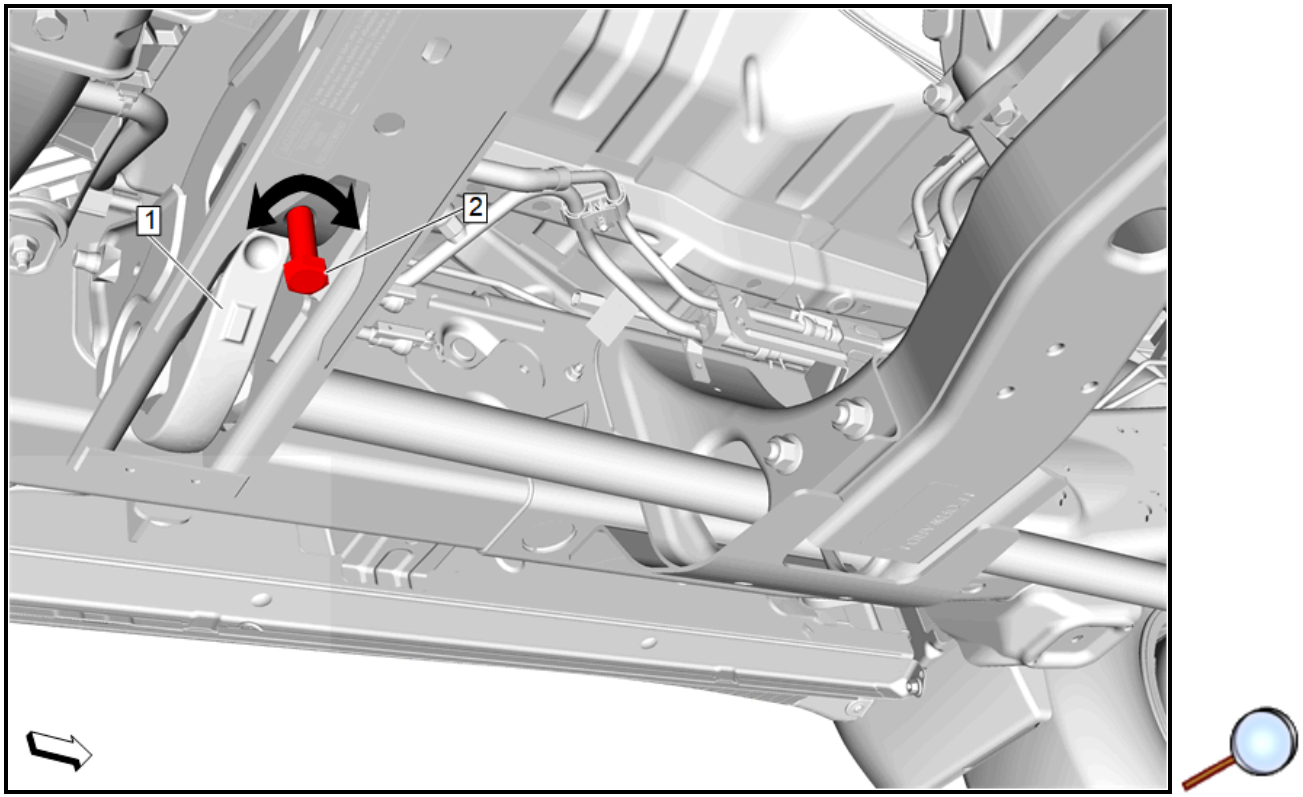


3. Set the top edge of the level (3) on the reference surface of the steering knuckle (4) and extend the level (3) directly under the front end of the front lower control arm bolt (2).
4. While keeping the level (3) in contact with the reference surface of the steering knuckle (4), adjust the level (3) up/down until the bubble indicates it is horizontally level.
5. Measure the distance (a) between the center of the front lower control arm bolt (2) and the top of the level (3) for your first measurement.
6. Keep the top edge of the level (3) on the reference surface of the steering knuckle (4) and move the level (3) directly under the rear end of the front lower control arm bolt (1).

7. Measure the distance (b) between the center of the front lower control arm bolt (1) and the top of the level (3) for your second measurement.
8. Average the measurements (a) and (b) and record the results.
9. Repeat steps 4 through 9 for the opposite side.
10. Compare the results with specifications. Trim Height Specifications

Z Height Adjustment

1. Inspect and replace worn or damaged components as necessary.



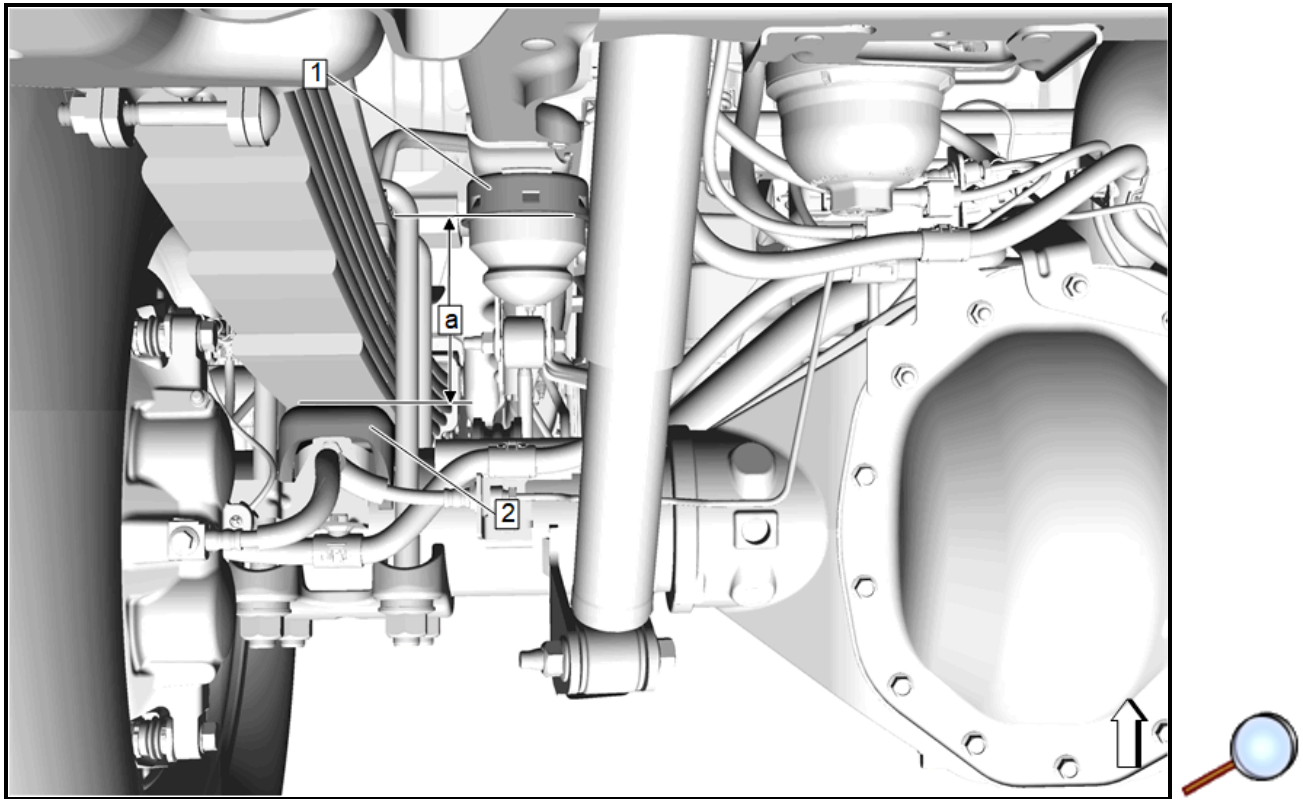
2. Turn the torsion bar adjust bolt (2) as necessary changing the position of the torsion bar adjust arm (1) to adjust the Z height.
3. Repeat step 2 for the opposite side.

D Height Measurement

The D height dimension measurement determines the proper ride height of the rear end of the vehicle. No adjustments are possible and could require replacement of suspension components.

Note: There are no specified trim heights specifications on leaf spring vehicles because it is not an adjustable feature. The height of the suspension will depend on the option content of the vehicle as well as the aftermarket equipment that is placed on the vehicle. The measurements are used for comparison only and should be within 12 mm with the vehicle at curb and no accessories.

1. Jounce the rear suspension of the vehicle by pushing the vehicle down and lifting up.
2. Allow the vehicle to settle and take a measurement.



3. Measure the D height dimension (a) from the jounce bumper cup (1) to the surface of the rear axle pad (2).
4. Compare the recorded readings with specifications. Trim Height Specifications
5. If any of these measurements are out of specifications, inspect for the following conditions:
   - Worn or damaged suspension components
   - Collision damage