

Uncontrolled Copy

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Version 11

Title

Frame Or Cab Lean

Abstract

Frame lean can be caused by several seemingly isolated possibilities. The two most common are suspension and frame assembly issues.

Content

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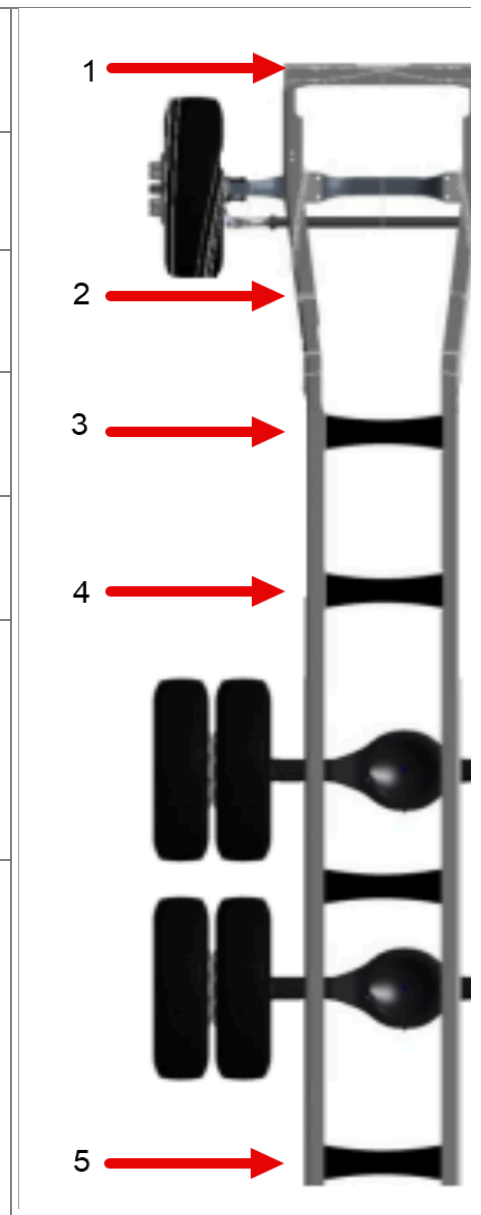
Valid For

Mack models - All
Volvo Models - All
Model year 2016 to current.

First, suspension-related causes must be ruled out, as they form the foundation for diagnosing other issues. Without addressing these first, you may end up "chasing ghosts." Confirm that all suspension components are correct for the truck and axles, paying particular attention to the axle seats. Ensure that paired parts, such as springs, are identical on both sides of the same axle, whether it's the front or rear drive axle. Some reports suggest the issue could stem from frame lean or "ladder torqueing" of the frame structures during assembly. This is still under investigation, and gathering accurate information is critical. Be cautious when measuring frame heights in relation to shop floors, as floor irregularities could affect the readings.

Minimum measurement locations

	Location	Measurement	
		Left	Right
1.	Front of Frame		
2.	Rear of Frame		
3.	Back of Cab		
4.	Front of Tandems		
5.	Rear of Tandems or Rear of Frame		

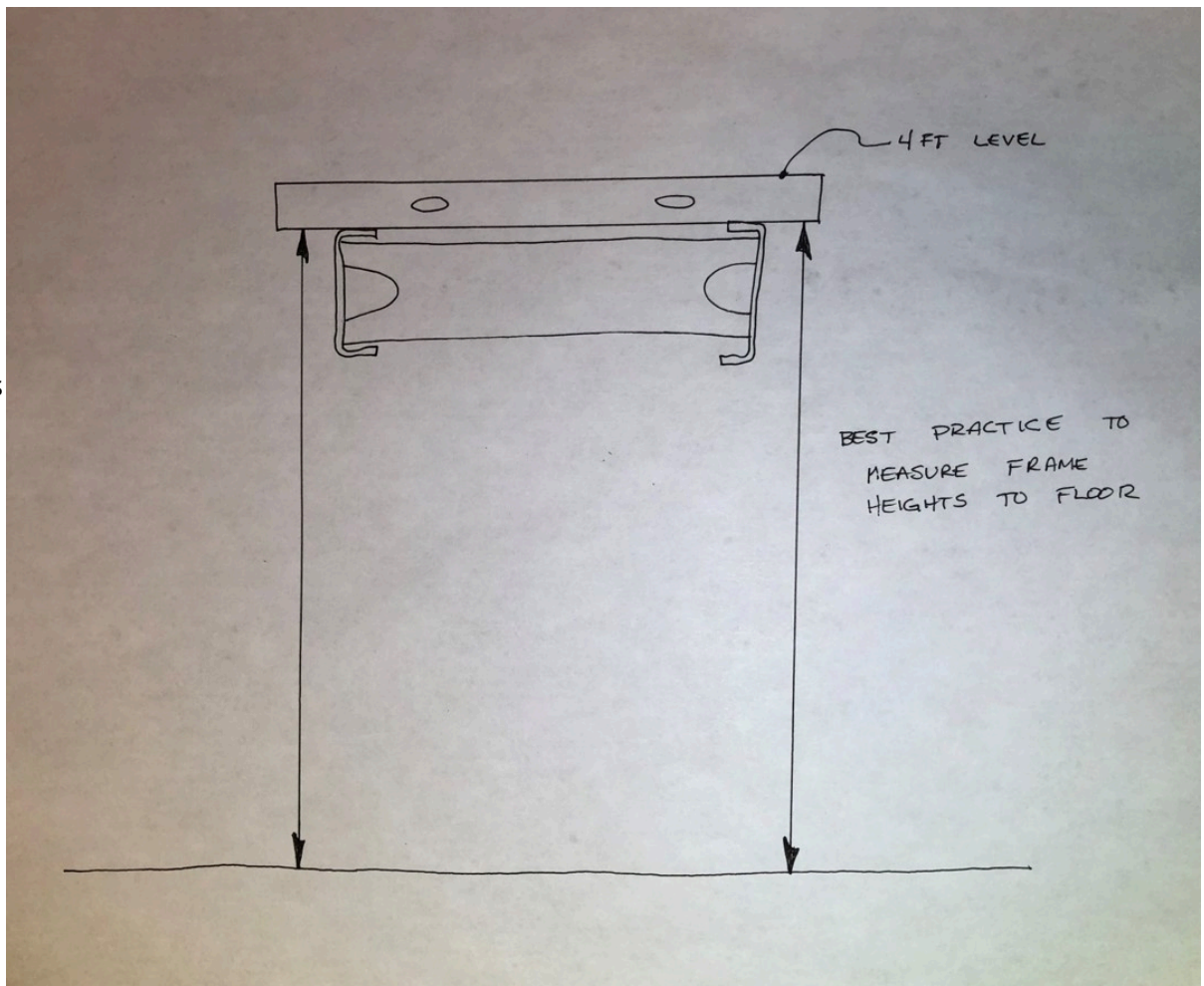


Click [HERE](#) for a printable worksheet.

Best Practice For Frame Measurements

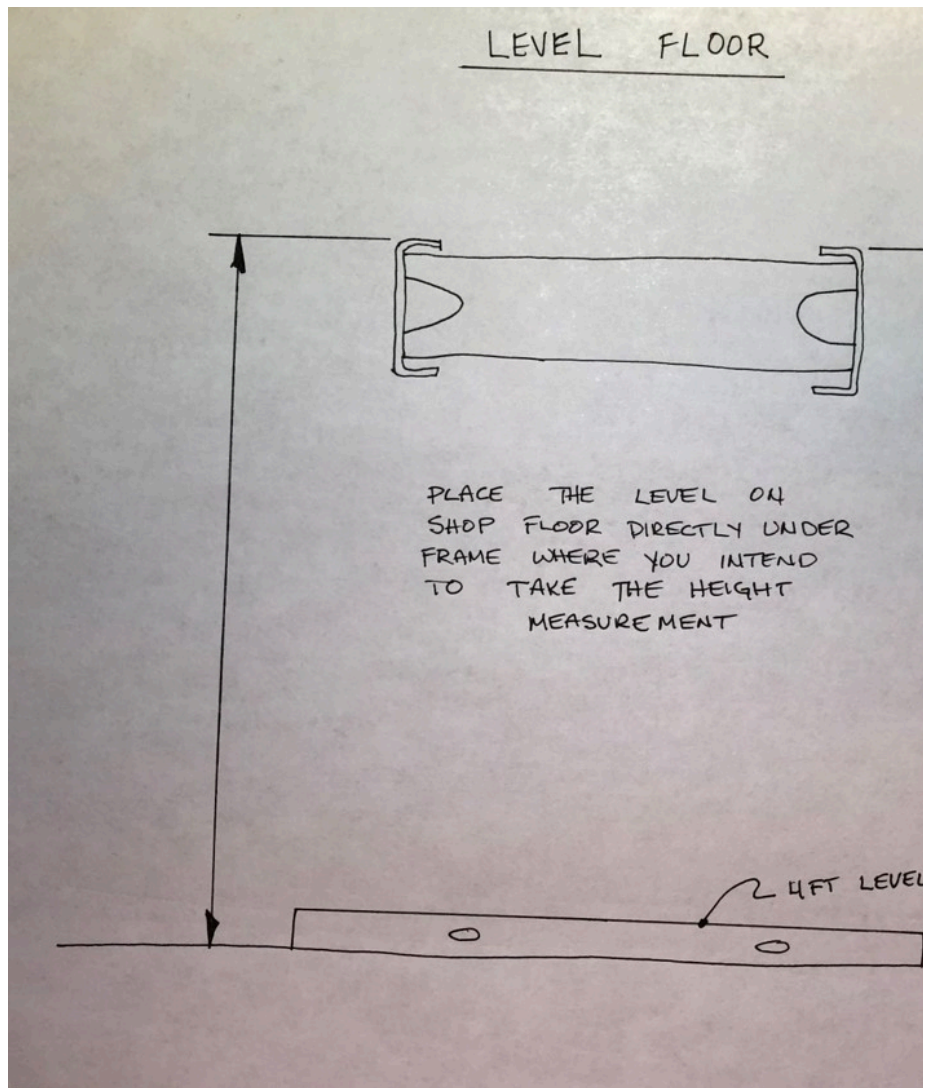
Use a 4 ft level across the upper frame flanges and measure from the underside to the floor.

This eliminates issues in the flange bends.



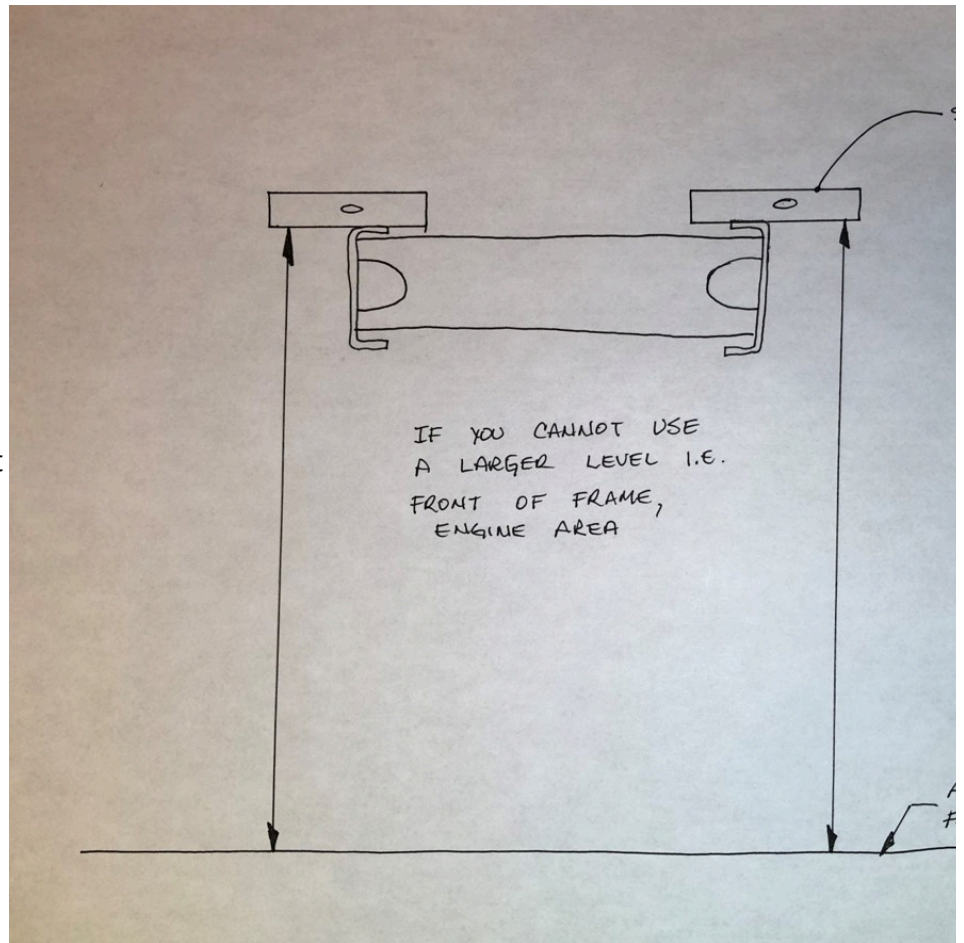
Checking shop floor for level when measuring frame for level

Use the 4 ft level on the shop floor directly under the frame where you will be taking each measurement.

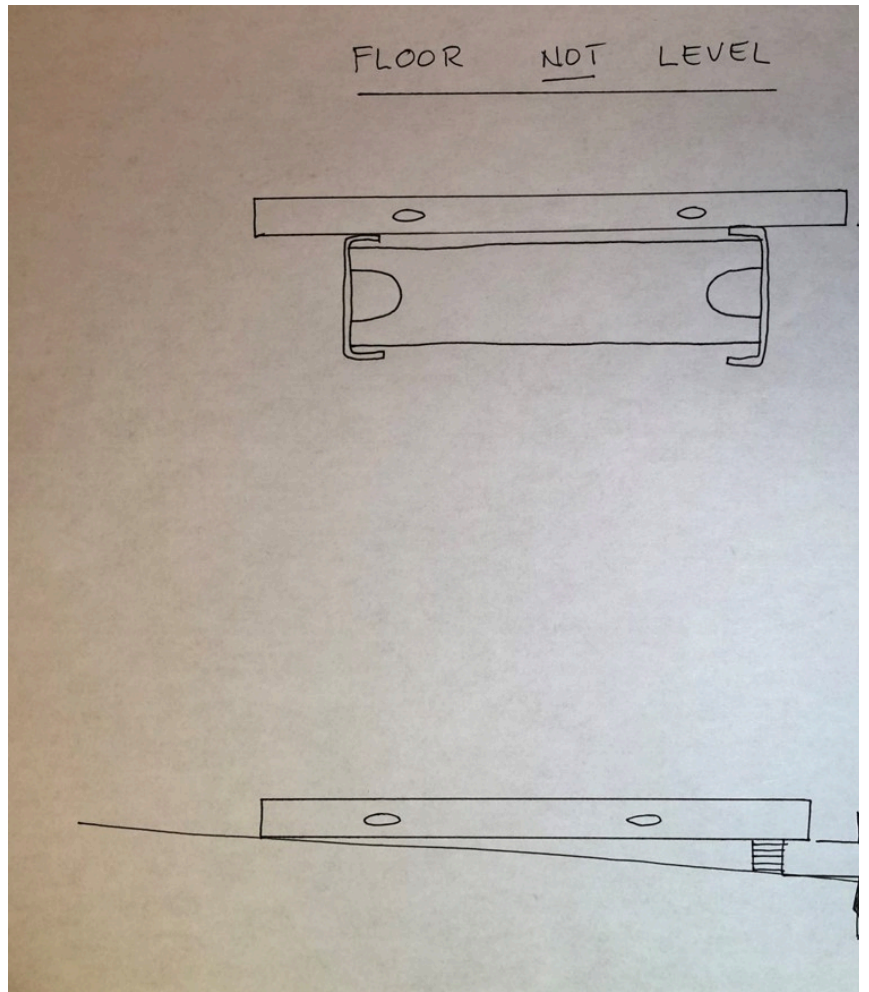


Measuring frame height where a 4 ft level will not work.

Use a smaller level or a torpedo level where the longer level will not work, i.e. engine compartment, front of frame.
Again, check the shop floor at each measurement location.



Floor out of level at measurement location



Where the shop floor is NOT level, shim the 4 ft level and then subtract the difference from the measurement at that location specifically

Tags

k32830643

mack

frame height

frame lean

cab lean

mmd

vn4

vn 4

volvo

Categories *

Make and Model > Mack Americas > CXU/CHU/PI - Pinnacle

Make and Model > Volvo > VNL

Make and Model > Volvo > VNR

Make and Model > Volvo > VNM

Make and Model > Volvo > VNX

Make and Model > Volvo > VAH

Make and Model > Volvo > VHD



rd Model > Mack Americas > MMD

Make and Model > Volvo > VNR Electric

Make and Model > Volvo > All-New VNL

Make and Model > Mack Americas > MRU/TE - TerraPro

Vehicle System > Suspension and Steering

Vehicle System > Frame

Make and Model > Mack Americas > AN - Anthem

Make and Model > Mack Americas > GU/GR - Granite