VIEW 2.0 Measurement Instructions

Updated May 2024

Introduction

This document explains how to collect data to create visualizations from using the VIEW blind zone measurement tool. There are two parts to collecting data:

1. Measure the upper and lower bounds of how much the driver's seat can be adjusted in relation to the front of the vehicle and to the ground.
2. Use your phone to create a 3D scan of your vehicle using Light Detection and Ranging (LiDAR).

Materials Needed

- Pro iOS device (iPhone 12 Pro/iPad Pro 4th gen or newer)
- Polycam app (download on the App Store)
- Selfie stick (*optional, only required if measuring vehicles larger than vans)*
- 8+ foot tape measure (2x recommended)
- Removable tape (ex: painter's or masking tape, sticky notes)

Note General Vehicle Information

When adding a vehicle to the VIEW database, you will be asked to provide general information about the vehicle:

- **Make**
- **Model**
- **Year***
- **Body class****
- **Weight class*****

If you do not know the make, model, or year of your vehicle, you can find this information in the manual or by looking up the vehicle's VIN or license plate number.

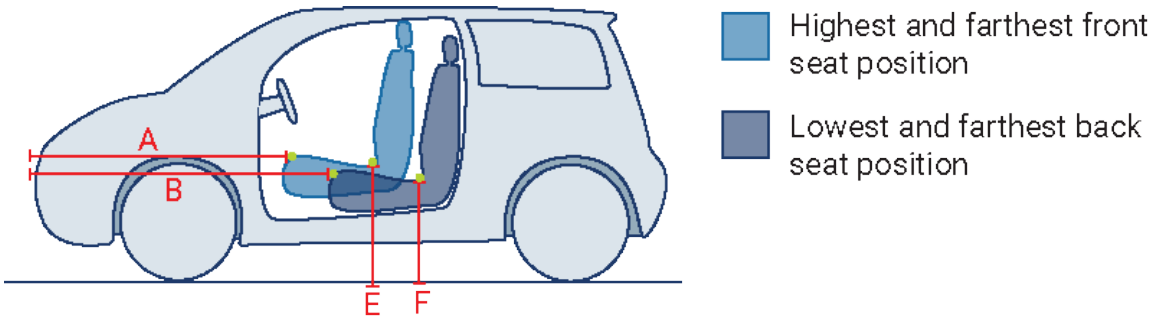
**Vehicle year refers to the model year, not the year of manufacture/purchase. Vehicles may be sold with a model year beyond the year of sale (ex: a 2012 model year sold in late 2011). Confirm the model year of your vehicle before submitting an entry.*

***Body class refers to the US Federal Highway Administration (FHWA) vehicle body classification system. (https://www.fhwa.dot.gov/policyinformation/tmguide/tmg_2013/vehicle-types.cfm)*

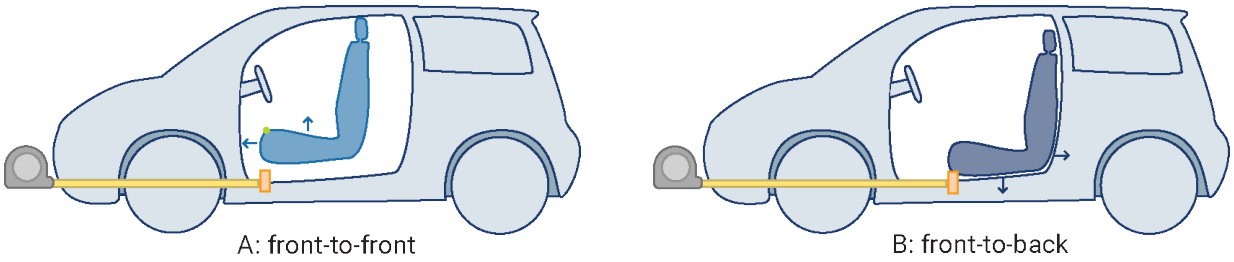
****Weight class refers to the US Federal Highway Administration (FHWA) vehicle weight classification system. Passenger vehicles are generally class 1. (https://afdc.energy.gov/data/10380)*

Measure Vehicle

The first step of collecting data to create visualizations using the VIEW blindzone measurement tool is to measure the upper and lower bounds of the driver's seat adjustment in relation to the front of the vehicle and the ground. Having two people and an extra tape measure will simplify the measurement process.

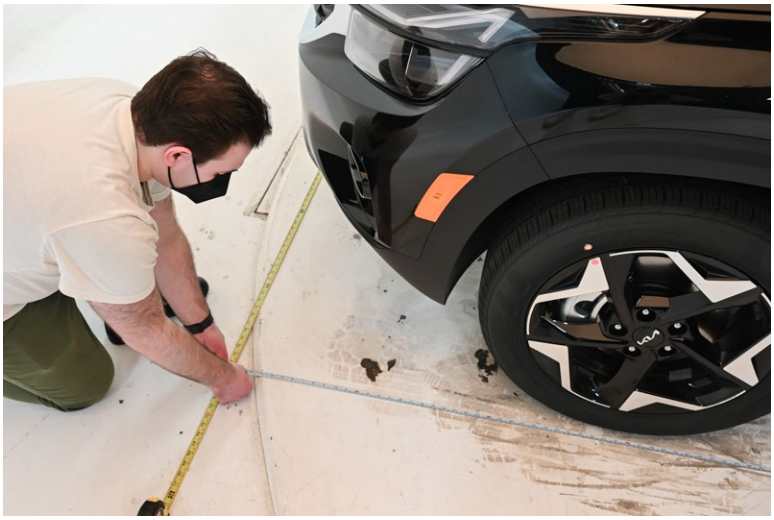


Part 1- Front of driver's seat to the front of vehicle hood

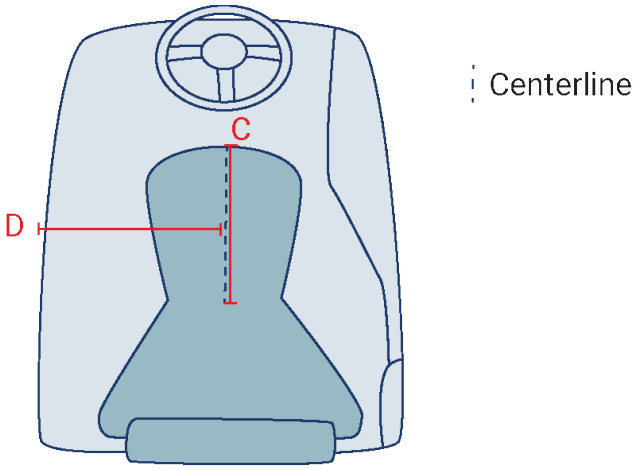


1. Adjust the driver's seat to the highest and farthest forward position
    a. Use tape to mark the location of the front of the seat on the side of the vehicle
2. Adjust the driver's seat to the lowest and farthest back position
    a. Use tape to mark the location of the front of the seat on the side of the vehicle

3. Using a tape measure, measure the distance along the side of the vehicle between the front of the hood and each tape marking. If you have a second tape measure, it can be used as a guide to aid in finding the front of the hood when measuring along the side of the vehicle. Run the second tape measure along the width of the vehicle in line with the hood, then run the first tape measure to the guide.



    a. Note these measurements as “**A: front-to-front**" and “**B: front-to-back**"



Part 2- Driver's seat depth

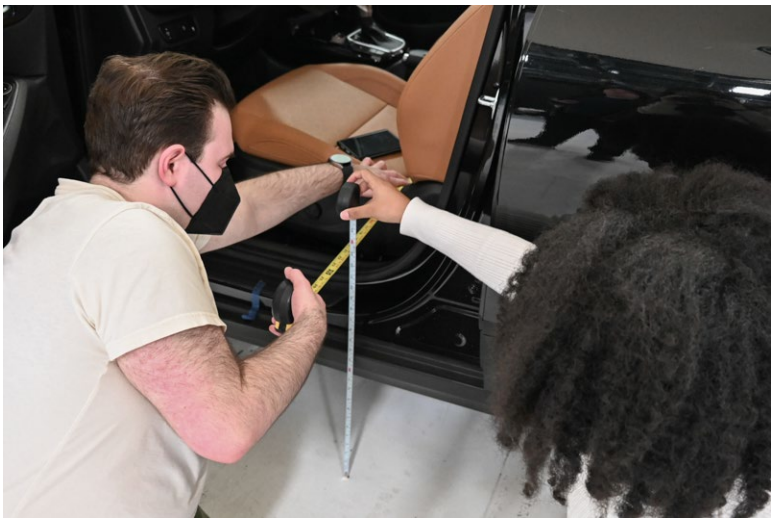
4. Measure along the driver's seat centerline from the front of the seat to the farthest back point where you can sit.
    a. Note this measurement as "**C: seat depth**"

Part 3- Driver's seat center

5. Measure from the centerline of the driver's seat to the outermost point of the vehicle on the driver's side. If you have a second tape measure, it can be used as a guide to form a line between the outmost point of the vehicle and the tape measure coming out from the seat.
    a. Note this measurement as "**D: seat center**"

Part 4- Driver's seat height

6. With the seat at its highest height, measure from the top of the seat, at its deepest point, to the ground. If you have a second tape measure, it can be used as a guide by lining it up with the seat cushion and flexing around any plastic components of the seat.



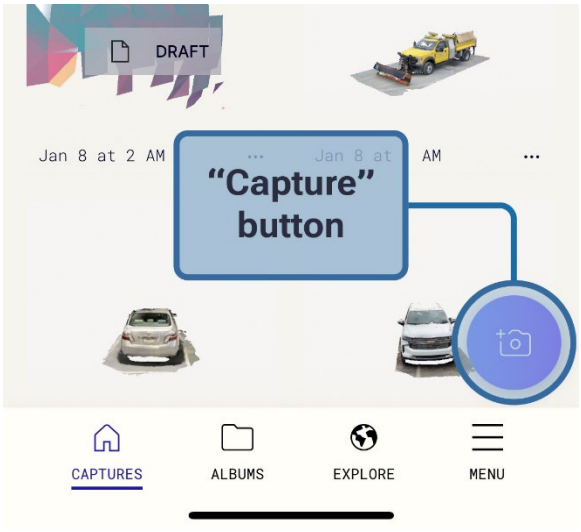
    a. Note this measurement as "**E: seat high**"

7. With the seat at its lowest height, measure from the top of the seat, at its deepest point, to the ground. You may need to shift the seat forward to reach the back of the seat cushion for measurement. If you have a second tape measure, it can be used as a guide by lining it up with the seat cushion and flexing around any plastic components of the seat.
    a. Note this measurement as "**F: seat low**"

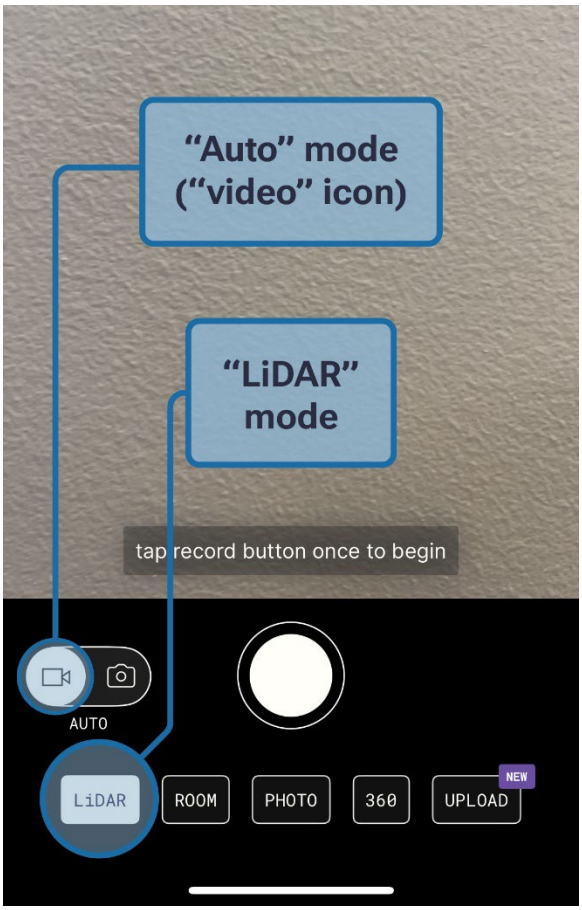
Taking a LiDAR Scan

The second step of collecting data is to use your mobile device to create a 3D scan of your vehicle using Light Detection and Ranging (LiDAR).

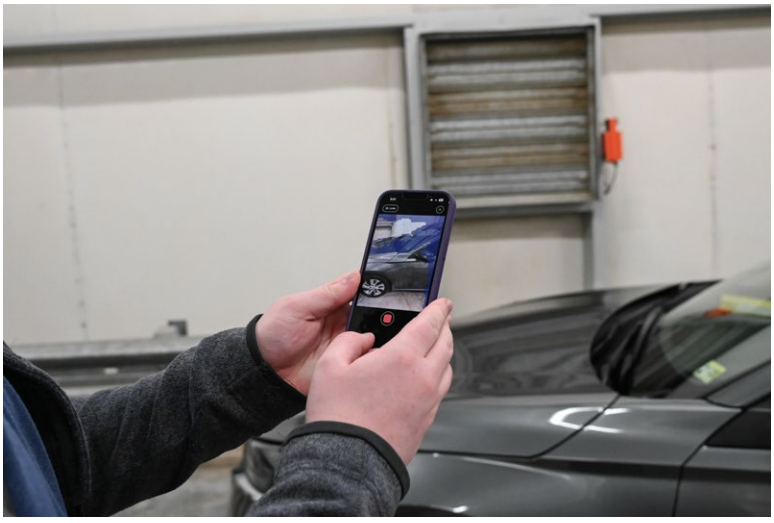
1. Download the Polycam app from the App Store
2. Open the app and hit skip on anything that asks you to pay for a subscription (you may need to set up an account, but you can do this for free)
3. From the home page of the app, press the camera button on the bottom right (if you are already in the camera section, ignore this step)



4. In the camera, make sure both video mode and LiDAR mode are selected



5. Align the phone with the axes of the car with the screen facing you. The easiest way to do this is to set it up against a rear wheel, making sure that the phone is still vertical (see the LiDAR Scan Process video for reference)
6. While the phone is aligned, press the record button to start the scan
7. Slowly move away from the wheel and begin the scan process. Move slowly up and down while walking around the car, making sure to fill in any blue gaps. Take your time – if you are too fast, the scan will become so far off that the app cannot fix it.



8. Once done, hit the record button again to stop the scan
9. You will be brought to a page with a rudimentary scan of the vehicle. Press the “process” button in the bottom right to process your scan. Depending on the size of the vehicle, this can take anywhere from ~30 seconds to a few minutes. Once the scan has processed, you may see a popup asking you to subscribe or pay for the service. Close out of the popup, as you do not need to subscribe.
10. Press the download button on the top right of the screen (not the upload button) to save your scan. The only option available for free users is GLTF. Use this. You may now send the file wherever you would like for ease of uploading to the blind zone measurement tool.