



Kansas RTAP Fact Sheet

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Does Your Vehicle Fit Your Driver?

Apply the principles of CarFit to your transit vehicle.

By Anne Lowder

Checking to see that your drivers and the transit vehicles they drive fit well together is important for safety. For example, the rear view mirror may not be at the correct angle. Or the angle of the side view mirrors may result in a blind spot. Or the shoulder strap on the seat belt may need to be lowered a bit. A driver's position in a vehicle is critical when it comes to driving control. Proper positioning in the vehicle allows your driver to have greater steering control and sufficient vision around the vehicle and down the road.

A program called CarFit, created by the American Society on Aging and developed with AARP, AAA and the American Occupational Therapy Association is designed to help seniors improve the fit of their vehicles, promote conversations about safe driving and mobility options, and offer resources to help promote safe driving. The process and the tips that come from a CarFit check can easily be transferred to your transit agency and your drivers. [In fact, we're planning to add CarFit assessments to the KSRTAP Defensive Driving Course.] This article will describe a CarFit assessment and its benefits to any driver.

What takes place at a typical CarFit appointment?

CarFit is a 20-minute assessment that begins with the driver completing some simple paperwork. A trained technician then uses a checklist to review 12 key



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If you don't have a certified CarFit technician available, like Kansas Highway Patrolman Donald Hughes (above, at a CarFit assessment in Topeka), use the 12-point checklist to do your own assessment of your vehicle's fit for your driver.

areas of the driver's fit to the vehicle. Adjustments include proper positioning of the steering wheel, distance between chest and steering wheel, head restraint alignment, line of sight above the steering wheel, positioning to gas pedal and brake pedal, mirror adjustments, neck mobility for visual blind spot check, and operation of vehicle controls.

In what ways can CarFit improve road safety?

Kansas Highway Patrolman Donald Hughes, a trained CarFit technician, gave these three quick examples of how a CarFit assessment promotes road safety.

Example one: Knowing how to properly adjust one's mirrors can greatly minimize blind spots for a driver who may wish to change lanes.

Example two: Good foot positioning on the gas and brake pedals is important. If the driver is reaching with his or her toes to press on the pedals, it can cause leg fatigue and slowed reaction times.

Example three: A driver runs a risk of serious injury if sitting closer than 10 inches to the steering wheel.

How is CarFit different than typical safety training?

Driver safety programs, such as "Coaching the Van Driver," improve adult driver safety by addressing cognitive abilities and skills. CarFit assessments, on the other hand, focus on the driver's position in a vehicle, which is critical for driving control. Proper positioning allows you greater steering control, as well as a dramatic increase in vision around your vehicle and down the road.

The CarFit 12-point checklist

The checklist covers characteristics of the vehicle as well as the driver:

1. Are you the only driver of the vehicle? If the answer is no, all drivers should be adjusted to the vehicle.
2. Do you wear your safety belt every

time you are in the car? The belts should be bone-to-bone for placement. The shoulder belt goes across the collar bone and breast bone and the lap belt runs across the hip bones. Safety belts should never run across soft tissue such as the neck or stomach areas as this could lead to internal body damage in a crash at a speed as low as 30 mph.

3. The steering wheel, in a vehicle with a driver's-side air bag, needs to be tilted to point at the driver's chest (not the face). The tilted steering wheel should not obstruct the driver's view of the speedometer.

4. The driver's chest needs to be at least 10 inches from the steering wheel. Any closer, the driver risks arm, neck or facial injury in a crash.

5. The steering wheel needs to be tilted so that the driver's line of sight is 3 inches above the steering wheel. Another tip is hand placement on the steering wheel. Like me, many of us were taught to grip the wheel at 10 and 2 o'clock, as on the face of the clock. It is now recommended to grip at 3 and 9 o'clock or 4 and 8 o'clock. This allows for optimum control of the steering wheel while minimizing chance of injury if the air bag deploys.

6. Head restraints, a.k.a. head rests, reduce risk of neck injury from whiplash during a rear-end collision. The top of the head rest should be adjusted to a point slightly above your ears and, if possible, within 3 inches of the back of your head when you are seated in a normal, upright position. A driving tip to reduce injury is to avoid leaning forward while you drive.

7. The driver should be able to operate the brake and gas pedals with the ball of

the foot, without having to reach with the toes. (At this time in the assessment, the technician will check that the brake lights are in working order.)

8. Properly adjusted mirrors keep you aware of your surroundings and minimize your blind spot. A driving tip from the National Safety Council recommends checking the view in your mirrors every 3 to 5 seconds.

The rearview mirror. Once the driver is in a properly adjusted seat, he or she should be able to look in the rearview mirror and see directly out the center of the rear window. The driver should check the view of the outside edges of the rear window. If either edge is more visible than the other, re-adjust the mirror.

The sideview mirrors. When it comes to eliminating blind spots, properly-adjusted sideview mirrors, and checking them often while driving, are key. To adjust the driver's side mirror, lean as far as you can toward the mirror, and then tilt your mirror so that you can just barely see the rear of your vehicle in the mirror. When you sit back in the seat, it may seem like the mirror is too far out, but it is actually now showing you part of your blind spot as well as maximizing your view of the road beside you. To adjust the passenger side mirror, simply lean toward the midline of the vehicle, as far as you can toward that mirror, and then tilt your mirror so that you can just barely see the rear of your vehicle in the mirror.

9. As we age, we lose neck mobility. To check neck mobility, have a person stand on the left and right of the vehicle. The driver will look over his/her left and right shoulder and identify the person standing beside the vehicle. Knowing neck mobility limitation will help in identifying and reducing blind spots while driving.

10. The driver should be able to insert the ignition key and turn it with ease.

11. Basically, this step in the assessment is a pre-trip check of the driver's knowledge the vehicle controls and how they work. Certified CarFit trainer Trooper Donald Hughes of the Kansas Highway Patrol, pointed out that many people do not know where the emergency flashers are—he said some drivers reach for the top of the steering wheel where the button used to be, on older model vehicles. Now the emergency flasher button is on the dashboard with a red triangle on it. Other controls to check include the left and right turn signals, headlights (high and low beam), windshield wipers, parking brake and that the steering wheel easily turns from far left to far right.

12. The last item on the CarFit assessment is education on proper tire traction and pressure and the importance of cleanliness of headlights and the windshield.

Summary

The CarFit 12-point assessment can actively engage your drivers in adjusting transit vehicles to themselves in a way that maximizes control of the vehicle as well as offering the most protection for the driver in the event of a crash. It's good for them and good for your agency. Watch for more information in our newsletter on CarFit assessments coming in 2015. ●

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Sources

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