Turns: Reviewing basic technique

Though turning is a maneuver you perform several times each day, it can be challenging and should be reviewed frequently.

In order to perform turns correctly, you need to plan in advance, allow for off-tracking, and watch the vehicle’s mirrors.

Off-tracking

Off-tracking is something that happens to all vehicles that have more than one set of wheels. The term “off-tracking” means a vehicle’s rear wheels don’t follow the same track (or path) as the front wheels when moving through a turn or curve.

When turning, the vehicle’s rear wheels follow a shorter path than the front wheels.

There are three factors that determine off-tracking in a tractor-trailer unit:

- The distance between the kingpin and the rear trailer wheels (the greater the distance between the kingpin and rear trailer wheels, the more off-tracking occurs);
- The amount of sideways drag of the rear tires (the more sideways drag, the greater the off-tracking); and
- The speed of the vehicle.

Right turns

Good judgment, proper speed control, and accurate steering are all important in executing safe right turns.

When approaching an intersection, adjust the vehicle’s speed. The sharper the turn, the slower the vehicle should be moving. This allows the use of all available space.

Shift into the correct gear before the turn and complete the turn in the same gear. This allows you to keep both hands on the steering wheel during the turn.

One thing to remember is that a tractor-trailer must pull further into the intersection than a smaller vehicle in order to avoid hitting the curb. One basic rule of thumb is to get about one-half of the rig past the corner before beginning the turn. Once the vehicle has reached that point, turn the steering wheel to the right and complete the turn. Accelerate slightly to smooth out the turn.

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Before, during, and after the turn, check both the right and left mirrors for the position of the trailer wheels.

When approaching a corner for a right turn, position the trailer so vehicles cannot come between the trailer and the curb.

Immediately after the turn is complete, turn the steering wheel back to straighten out the wheels.

Turning mistakes

The following are some of the most common errors made when executing a right turn:

• Not sizing up the corner properly;
• Approaching the intersection too fast;
• Forgetting to gear down before beginning the turn;
• Accelerating in the turn;
• Shifting gears while turning;
• Leaving too much space between the trailer and the curb;
• Forgetting to allow for off-tracking; and
• Not watching the right mirror before, during, and after the turn.

Left turns

As with a right turn, reduce vehicle speed when approaching an intersection. Shift into the correct gear and keep the vehicle's wheels straight before starting the turn. As with the right turn, complete the turn in the same gear.

When executing this maneuver, turn from as far right in your lane as possible to allow for plenty of room for the tractor-trailer. If the vehicle turns too soon or too tightly, off-tracking may cause the left side of the vehicle to hit another vehicle.

Watch the mirrors before, during, and after the turn. Turn the steering wheel back to the right immediately upon completion of the turn.

If on a road with two left turn lanes, use the outside (right) lane.

The most common errors made when executing a left turn are the same as those for a right turn, except the errors are made from the other side.

Roundabouts

When approaching a roundabout, watch for signs to assist in selecting the appropriate lane and slow down. Yield to pedestrians and bicyclists as well as traffic on the left that is already in the roundabout.

Enter the roundabout when there is a safe gap in traffic, and then maintain a low speed within the roundabout. When approaching the exit, turn on the vehicle's right signal, and make sure to yield to pedestrians and bicycles when exiting the roundabout.

Drivers of large vehicles need to take additional steps to ensure safe navigation through a roundabout.

When making a right turn, the vehicle may need more space than what is provided in the lane of travel, and in some cases the vehicle may need all available space. Be alert for surrounding traffic, and as entering the roundabout, proceed with caution.

When making a left turn, select the lane that keeps traffic on the “sight side,” if possible. Check for surrounding traffic and when clear, enter the roundabout keeping in mind that the trailer may off-track onto the truck apron. The mirrors should be continually checked until the truck clears the roundabout.

When making a through movement, select the correct lane, and if possible try to keep traffic to the left. Check for surrounding traffic, and continually check the mirrors until the vehicle has safely cleared the roundabout.

Mirrors

Proper use of mirrors can play an important part in executing safe turns. Though they cannot provide a complete picture of everything going on around your vehicle, they can assist you in checking your vehicle's blind spots. Most tractors are equipped with plane and convex mirrors.

Plane mirrors assist you in seeing down the sides and toward the rear of your trailer as well as the road behind your vehicle. Plane mirrors allow for visibility down the length of the trailer, but there are some blind spots on both sides of your vehicle.

Convex mirrors provide a wide angle view and, if adjusted correctly, can eliminate much of the blind area. Convex mirrors provide the best close-up view of the sides of your vehicle.

A combination of plane and convex mirrors work best by providing maximum side and rear vision. For the best results, frequently make sure your mirrors are properly adjusted and are clean.
Safety focus: The driver shortage

In a white paper released by the American Transportation Research Institute (ATRI), it is pointed out that the demographics of the transportation industry are contributing to the driver shortage. Not only is it contributing to the shortage, but left unaddressed the current demographics will rapidly worsen the shortage in the coming years.

The driver shortage

According to the researchers, there are three driving factors in the driver shortage. They include:

- Competition within the industry.
- Driver qualifications/requirements.
- Workforce demographics.

Competition

Competition within the industry has led carriers to work very hard to keep costs low, so they remain competitive. However, this has had a chilling effect on drivers’ wages, leading to some drivers exiting the industry. This has also led to the industry not being as attractive of an employment option to the general public as it once was.

This competition also leads to considerable “churn,” as drivers continually move from one carrier to another. Carriers need drivers and competitors’ drivers are seen as the “ready supply” of new drivers.

To attract them, carriers try to make better offers than their competition. This, in turn, encourages churn and eventually driver frustration, which can also lead to drivers leaving the industry.

Qualifications

The basic qualification requirements to enter the industry may also be a problem. Simply securing a CDL (the most basic qualification requirement) involves multiple weeks of training with no paycheck. Also, the training itself can cost $6,500 (or more), which is prohibitive to many people.

According to ATRI’s research the requirements to remain employable within the industry also play into the shortage. Programs such as CSA and the Pre-employment Screening Program discourage the hiring of certain drivers, in effect removing them from the pool of available drivers.

Demographics

This was the focus of the white paper, and the research pointed out some significant issues. These issues include:

- The average age of a truck driver is now 52 years old.
- The trucking industry has a disproportional number of employees over 45 years old.
- Many of the industry’s workers will be retiring in the next 10 to 20 years.
- Over the last 20 years, the number of drivers under 35 years old has dropped dramatically.

To sum up the problem, post-Baby Boomer adults (particularly those now in their twenties and early thirties) are not in the industry in sufficient numbers. Thus, as the older generations retire, the driver shortage will worsen.

Potential reasons

The study pointed out several possible reasons that younger workers may not be coming into the transportation industry. These include:

- The difficulty in transitioning from high school to the industry. The age requirements in the regulations and placed on the industry by insurance companies all but guarantees that driving a commercial vehicle will not be a high school graduate’s first job. It can be difficult to attract individuals after they are established in another occupation.

- The recession. Many younger drivers were displaced out of the industry during the recession, when demand for drivers was low. These individuals found gainful employment in other sectors (oil and gas, construction, etc.).

- The availability of a college education. While getting a college education does not rule out the person going into driving, it does greatly reduce the odds that the person will become a driver.

Potential solutions

The report does provide some potential solutions that the industry and companies should consider, including:

- The industry developing programs to target and attract younger workers.
- Having programs in place to retain the existing aging drivers.
- Conducting research on the expectations and perspectives of the younger generations when it comes to the industry.
People with certain skin types are at greater risk for skin cancer. There are six skin phototypes, ranging from light to dark. While individuals with lighter skin (types I and II) are at higher risk for skin cancer, those with darker skin (types V and VI) can also get skin cancer. In fact, those with darker skin tend to be diagnosed with skin cancer in its later stages, which often means the cancer is more advanced and potentially fatal.

Construction workers and others who work primarily outside are at high risk for skin cancer. The face, back of the neck, hands, and arms are particularly susceptible to sun damage.

Taking certain prescription or over-the-counter drugs may increase a person’s sensitivity to sunlight and risk for sunburn. These drugs include certain antibiotics, painkillers, acne medications, and diuretics.

A person can be exposed to dangerous UV rays when using a tanning bed, booth, or sunlamp. As with excessive sun exposure, indoor tanning is associated with an increased risk of melanoma, and basal cell and squamous cell cancer.

You may not give a second thought to the risk of sun exposure while inside your car or office, but research shows that skin exposed to sun shining through window glass can lead to significant skin damage over time. In the U.S., dermatologists have noticed more skin damage on the left side of patients’ faces and arms. Likewise, in countries where the driver’s side is on the right, skin damage is more pronounced on that side of the body.

A person’s risk for skin cancer can also be increased by:

- Family history of skin cancer;
- Personal history of skin cancer; and
- History of sunburns, especially early in life.