



## **TIPS ON DRIVING THE LIONS MOBILE EYE EXAM RECREATIONAL VEHICLE (RV)**

**INTRODUCTION:** This document provides guidance for the Lions Mobile Eye Unit RV drivers. The following topics are discussed:

- Vehicle Inspection
- Safety Belts
- Starting
- Driving
  - Cruise Control
  - Defensive Driving
  - Mountain Roads
  - Secondary Roads
  - Inclement Weather
  - Stopping
  - Following distance
  - Turning
  - Backing Up
  - RV Heights
  - RV Lengths
  - Parking
- Other Issues
- Additional Hints
- Disclaimer

**VEHICLE INSPECTION** - Before operating the vehicle, check the following items:

- Capacities.
  - Engine oil.
  - Automatic transmission.
  - Coolant.
  - Windshield wiper fluid.
  - Fuel tank(s) (cap(s) tight & sufficient fuel).
- Tire pressure and condition - including spare tire.
- Signs of fluid leaks under the RV.
- Head lights, turn signals, brake lights, and clearance lights are working.
- Windshield, side windows, and mirrors are clean.
- Jacks are retracted and leveling devices or aids have been removed/stored.
- Outside RV, all doors and hatches are closed; hoses and power cords are stowed; and all gear is properly stowed.
- RV is clear of any tree branches, signs, or other objects.

- Inside RV, lose objects stored, cabinet doors latched, etc.
- Sight testing equipment is correctly and firmly secured.

**Safety Belts** - Wear your seat belt when driving. Even though RVs can accommodate passengers in places where safety belts are not required by Federal law (i.e., dining table), if the area has a seat belt, wear it. Riding without a seat belt increases the chance of injury or death in an accident.

### **Starting -**

- Adjust the mirrors.
- Adjust the driver's seat so you can comfortably reach pedals and other controls.
- Adjust any controls you may need to use while driving, e.g., radio, CB, GPS, etc.
- Test the RV's horn.
- Make sure the gas gauge works and you have sufficient fuel.
- Test the Brakes: Turn on the engine. Put the RV in drive gear, release the hand brake BUT firmly press the foot brake. Try to move forward. If the brakes don't hold the RV in place, chances are the brakes will not properly stop the RV. If the brakes fail this test, don't drive the RV. It requires immediate inspection by a brake specialist.
- Turn on your lights.

First-time inexperienced drivers need to practice getting the RV to cruising speed safely. This practice should happen on a vacant road/street where the risks of accidents can be minimized. Conduct several maximum acceleration sequences to learn how much space is required to safely merge into traffic.

### **Driving -**

**Cruise Control** - There are differencing opinions regarding cruise control. Using cruise control on the open road allows you to concentrate on your surroundings. Whereas, not using cruise control helps you manage your speed more precisely. Cruise control should not be used on congested highways.

### **Defensive Driving -**

- Telegraph your intentions to other drivers. Use turn signals to let others know your intentions.
- Always look far enough ahead so that you can use all the room available to get the RV into the safest lane. Use the mirrors to scan the side and rear of the RV.
- Anticipate the worst thing(s) that other drivers might do and be prepared to respond appropriately. Many drivers do not signal when changing lanes because they think you might cut them off if they do.

- In heavy congested traffic situations where you have three or more possible lanes, lots of exits, and heavy traffic, drive in the center lane. This allows flexibility and maneuverability.
- Scanning is a skill necessary to drive any vehicle. Scanning should help to identify potential risks. Play this game. Scan the highway ahead and think of the possible problems. For example, you're approaching an intersection where you have the green light. Is anyone approaching from the oncoming left lane that might try a left turn across the RV's path? Someone is pulling out of a shopping center on your right, do they see you? Will they pull out in front of you? Can you move to the left lane? Keep thinking of the possible scenarios of "what if" and how you can avoid an accident. This game will also keep you mentally alert.
- Avoid road rage. Losing your temper or getting back or even with another driver is not worth exposing your personal assets to a liability suit. No one wins. Also, driving in a reckless or dangerous manner creates bad publicity for the Lions Club because the Lions Club name and logo are prominently displayed on the RVs.
- Maintaining safe legal speeds is most important. By driving at the legal limit, most traffic will pass you. Whereas, driving above the speed limit increases your need to change lanes to pass other vehicles and thus increasing the chances of an accident. Driving above the posted speed limit also exposes the Lions Club and you to liability issues in the case of an accident.
- Remember that the vehicle behind you has the responsibility to stay clear of you. When you're driving side-by-side with another vehicle, you both share responsibility in staying in your own lane. Once a vehicle passes you, you are responsible for staying clear of that vehicle in front. So, when driving the speed limit, don't worry about vehicles having to pass you. It's their problem if they want to exceed the speed limit.
- Drive with your headlights at all times to increase your visibility to other drivers. Being a big RV doesn't necessarily mean that other drivers will always see you.

**Mountain Roads** - Professional drivers use the same transmission gear to descend a grade as the gear required to climb the grade. This is a good rule but road surface conditions, visibility, and other variables must also be considered. It may take a few seconds longer to get down the hill using the transmission but at least the brake lining will be saved and you will reduce brake fade. When using a lower gear down hill, don't worry about fuel economy. Saving the brakes for a steeper grade surpasses any concern for fuel economy.

When braking, keep a continuous light application on the brake pedal. This is less likely to cause brake fade than to allow the RV to speed up and then pumping the brakes hard to slow down.

If the brakes fail, look for a run off ramp designed for that event. If none is available, try losing speed by side swiping the mountain side or guardrail of the roadway. It is better to damage the RV than to destroy it entirely by going off a cliff, rolling over, etc.

When possible, use the Brake Test Area at the top of the hill to inspect and test the brakes and tires. Also, use turnouts when there are vehicles behind you that wish to pass you on steep hills.

**Secondary Roads** - Secondary two-lane roads require skill in judging where the RV's wheels are and how far the mirrors extend.

- Ruts next to the pavement can catch the right front wheel and cause you to drive off the road. This is one of the most frequent causes of RV accidents. If you fall in a rut, lift your foot off the accelerator and gently apply the brakes while you steer straight ahead letting the wheels stay in the rut until you are at a slower speed. Then gently turn to the left and slowly get out of the rut. Over correction by jerking the steering wheel left, when the momentum of the RV wants to go straight ahead, will cause jack knifing or overturning of the RV. Jerking the RV back onto the road may also cause you to cross lanes into oncoming vehicles.
- Traffic at right angles from secondary roads pose a potential problem. Even if there is a stop sign, rural drivers tend to run stop signs, since there is rarely any traffic. Keep scanning all possible traffic so that you can anticipate problems since you don't have very much room to maneuver.
- Beware of blind corners, since there may be a farm tractor right in the middle of the road around the corner. If you can't see down the road a sufficient distance, then you must slow down. You should be able to see at least 15 seconds down the road. Pick a place ahead and count the seconds it takes for you to reach that spot and if it isn't 15 or more, then slow down.

**Inclement Weather** - If you have to drive in heavy rain, fog, snow, ice, or dust, slow down and keep to the right. You should use all the illumination available and increase your vigilance.

If the road becomes slick and the RV begins to slide, remember to steer into the slide direction -- but not too far -- and be ready to correct the heading when the rear end starts to come back around. If the RV's rear end is sliding to the right, then steer right. If the rear slides left then steer left and be ready to correct just when the sliding stops or you will just slide the other way.

Remember, if hazardous weather conditions require the use of windshield wipers, you must also turn on the head lights.

**Stopping** - First-time inexperienced drivers should practice stopping on a traffic-free road or an empty parking lot. Perform maximum braking stops from various speeds so

that you will know how the RV will perform when stopping. Add an additional one second response time if the RV has air brakes.

At 55 mph, an RV travels 64 feet-per-second. To stop, you need to SEE-THINK-ACT. Total stopping distance is the distance the RV will travel from the moment you SEE a hazard; THINK to stop; and ACT by braking until you stop.

Some of the newer RVs have antilock braking systems. You should try using them when you have a controlled situation like a very wide empty street. Firmly apply the brakes and hold them down. The pedal will pulsate under your foot. They are designed to get maximum braking without locking the wheels.

**Following distance** - In good weather and visibility, the distance between you and the vehicle in front should equal the distance that you travel in four seconds. Pick a landmark that the vehicle in front will pass and then count four seconds until the RV gets to the same spot. The higher the speed the greater the following distance you need. For bad weather, add at least one second. For poor visibility, add another one second. For example, it's raining and the roads are wet, the following distance should be the time it takes to cover 6 seconds.

**Turning** - High-speed turning requires practice for safety due to the geometry of a typical RV. In general, an RV has a:

- momentum that makes the RV to go straight much more so than an automobile.
- much higher center of gravity and thus a greater tendency to tip over.
- suspension that is not as capable as a car in handling curves.

Practice turning maneuvers on a traffic-free road so that you will be prepared to avoid any hazard that you will encounter. Simulate emergency lane change turns at graduated speeds so you will know what the RV and yourself can do. Start this practice at 20 mph and work up to 60 mph.

Low-speed turns require practice since the longer wheelbases of an RV requires you to make wider turns. Knowing where the rear axle (the pivot point of the RV) is during these maneuvers is as crucial as knowing where the rear bumper is swinging. Proper use of mirrors will assist you in doing these turns safely. If possible, practice these maneuvers on a traffic-free road using traffic cones to simulate rocks, ditches, poles, etc.

When making a turn in an RV, always be aware of what is along side the RV. You need to keep checking your convex mirrors as you make your turn. If the mirrors are not properly adjusted, it is only a matter of time until you will hit something.

**Backing Up** - If you get into a situation that requires backing up, you have made a big mistake. Backing up is risky under even the best conditions so try to avoid it. School Bus and UPS drivers have learned never to back up because of the limited visibility

around the vehicle. In traffic, leave enough room in front of you so you can go forward if the car in front becomes disabled. If you have to back up without assistance, get out and go to the back to be sure it is safe to do so, even if you are blocking traffic.

If you need help, have someone stand where you can see them, and give very simple (non-verbal is best!) directions. Move forward, move backward, left, right, and stop are all the directions you should need. (Left or right means the back of the vehicle needs to move left or right.) It is vitally important that the person helping you also knows to look up, look down, and look around. And keep in mind that just as you cannot see all you need to see, neither can they, and you must also continue to look where you are going while watching them.

**RV Heights** - RVs are 9 feet tall or taller and that requires special driver's judgment and awareness to recognize low overhanging obstacles like trees, service station canopies, bridge heights, etc. The RV's owner's manual or the RV manufacturer are the best sources for determining the RV's maximum road height. Post the height somewhere on the RV so it will always be handy as a reference. Don't forget to include that air conditioner unit on top.

**RV Lengths** - Know the length of the RV and avoid roads that restrict the operation of vehicles over a certain size. Allow for the extra length when parking, changing lanes, passing vehicles, and merging onto a freeway.

Getting into an uneven driveway can be a real challenge. Taking the "trough" of a driveway on a 45 degree angle is the safest way to perform the maneuver. If there is not enough room to take it on an angle, try to get the angle closest to 45 degrees. There are many driveways that you don't want to take or you will leave part of the RV on the roadway. Scraping the bottom can cause significant damage to the RV and the driveway.

The vehicle's rear end protrudes significantly beyond the rear wheels. This means that when you turn the RV, the rear end is arcing out and may clip a mailbox, gate post, sign, or person.

**Parking** - Do not pull into a parking lot until you know that you have sufficient room for the entire RV. Park where you can later pull forward, avoiding backing out. Park where the ground is as flat as possible to reduce the effort to balance the RV. Do not let the RV's rear hang out in the traffic lane!

Park near a source of electricity for the Mobile Eye Unit. Run the electric line high above walkways so people won't trip on the line. If you must run the electric cord on the ground across a driveway or pedestrian path, use tape or carpet to secure it to the ground so no one will trip on the cord.

### **Additional Hints -**

- Give yourself plenty of time to change lanes and use your signals. Do not delay once you decide to change lanes.
- Be constantly aware of your surroundings and the vehicles alongside and behind you.
- Take corners (sharp corners, like at intersections or into parking lots) a little wider. Pull out straight, then turn a little later than you would in a normal length car.
- Check side and rear view mirrors every 30 seconds to be aware of what the cars around you are doing.
- Passing large trucks will rock the RV with their "wake." When trucks pass you, keep both hands firmly on the wheel.
- If there is a strong cross wind, you will notice "wind shadows" under overpasses or past trucks that block the wind. Maintain the wheels in a straight line, even while the RV yaws or rocks back and forth. If you over correct, you may lose control.
- When merging into traffic or changing lanes, match the speed of the traffic as closely as possible. This helps merging into the traffic lane and is far safer than expecting the traffic to slow down or speed up for you.
- Animals cross roadways, especially in the morning and evening. If one is in your path, do NOT swerve to miss it. Hold the steering wheel rock steady and use the brake. Better to hit the animal than to swerve and lose control.

**Other Issues** - Before you take the RV on the road, ask the Lions Club RV Coordinator what actions you take if the RV:

- becomes disabled.
- needs maintenance (e.g., needs oil).
- needs repair (e.g., flat tire), etc.
- has an accident.

**Disclaimer** - Driving any vehicle safely is the responsibility of the driver. This article outlines many driving techniques that should be considered when driving the Lion RV. Much of the above information was adapted from various sources. The West Virginia Lions Sight Conservation Foundation takes no responsibility for how you apply these recommendations.