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Some contributing causes of driving condition accidents

Light
- Over-driving headlights at night
- Blinded by headlight glare
- Blinded by morning or afternoon sun, reflected light from sun or vehicle components

Weather
- Driving in heavy rain, snow or fog with reduced visibility
- Slippery road surfaces
- High winds

Roads
- Obstructions and poor road surfaces

Vehicle
- Defective brakes, steering, tires, head lights, windshield wipers, heater
- Emergency stops

Traffic
- Construction zones
- School zones
- Rural or urban areas

Drivers
- Drunken or drugged drivers
- Immature drivers
- Driving errors or poor maneuvers
- Driving too fast for conditions

Tips to help avoid driving condition accidents
- Adjust speed and following distance to driving conditions
- Use headlights to see and be seen
- Use sunglasses, visors for daytime glare
- Check and maintain vehicle regularly
- Learn emergency driving: stopping on slippery pavement, correcting a skid, emergency stopping
- Consider conditions before starting out
- Keep alert to driving conditions
- Don’t drink and drive
- Drive defensively

Presentation
- Introduce topic of driving conditions
- Review the six basic conditions and ask for examples of each
- Ask how to anticipate and correct for adverse driving conditions
- Summarize discussion in your own words

Maintenance/Inspections
Safe driving and planned maintenance go hand in hand in total fleet safety. The best contribution a driver can make to good maintenance is frequent and thorough inspections.

Some contributing causes of vehicle defect accidents
- Failure to make a thorough inspection
- Failure to heed warning messages a vehicle sends: sound, sight and feel
- Failure to report a defect
- Vehicle neglect or abuse

Some indications of vehicle problems
- Bad shocks, weak springs (nose dive)
- Over-or under-inflated tires
- Defective wiring, lights, horn, windshield wipers, mirrors
- Under or oversteer
- Leakage
- Worn or defective belts and hoses
- Defective gauges

Tips to help to avoid accidents
- Develop thorough inspection habits
- Organize an inspection routine
- Note and report defects
- Develop a relationship with maintenance personnel
- Know your vehicle

Presentation
- Introduce maintenance and inspection topic
- What are some causes of maintenance/inspection accidents?
- What indicates a vehicle problem?
- How can a driver avoid maintenance-related accidents?
- Review driver inspection procedures
- Summarize discussion in your own words

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Introduction
Discussion topics have been prepared as a means of presenting safe driving facts and ideas about vehicle operation, driving techniques, hazards and accident causes.

The key to the success of this program is in driver participation. By getting drivers to talk and think about the fine points of safe driving, driver attitudes will be improved. Drivers can be involved through questions and answers and encouraging them to offer suggestions covering the topics discussed.

Discussion Topic
The purpose of the “Discussion Topic” is to focus a group discussion with a group leader and drivers. The focus is a topic of mutual interest where all involved can learn, express opinions and benefit from the experience of others. The group leader presents the topic and controls the discussion. The group leader should encourage participation from all participants and keep the discussion focused on the topic.

Meeting Ideas
Prior to the meeting
- Schedule the meeting.
- Notify drivers.
- Review the topic to be discussed.
- Order visual aids or prepare handout materials. Visual aids for the particular discussion topic can be selected from “Visual Aids for Traffic Safety” available from the State Auto Loss Control Representative. Order visual aids as soon as possible, and at least 30 days prior to your scheduled meeting.
- Arrange for a meeting place where drivers can be seen and heard easily.
- Arrange for any equipment that might be needed such as projectors, video players, chalk boards, flip charts, etc.

Running the meeting
- Compliment and welcome drivers.
- Emphasize the need for safe driving.
- Cover company’s accident rate.
- Review any accidents, safety violations.
- Discuss how an accident could be prevented and consequences of violations.
- Review driving conditions to be prepared for weeks ahead.
- Encourage driver participation. Urge them to answer questions, offer suggestions, and provide examples. The purpose is to get all drivers thinking about safe vehicle operation.
- Introduce the discussion topic.
- Guide the discussion.
- Close the meeting and recap the discussion in your own words. Thank drivers for their participation.

Presentation
- Introduce topic on driving habits
- What do you believe are some bad habits that cause accidents?
- What good habits can help avoid accidents?
- How can you change your habits for the better?
- Summarize discussion in your own words
- State and company policy on seatbelt use

Weather
Good weather – bad weather – we can’t change it – we must adjust to it. Bad weather causes accidents to fair weather drivers.

Some contributing causes of bad weather accidents
- Driving too fast for conditions
- Wind effects on steering
- Slippery roads
- Hydroplaning
- Reduced visibility and ability to be seen
- Windows frosted or steam-
ed
- Failure to clean windows
- Poor mechanical equipment – tires, windshield wipers, defroster, heater
- Increased braking distance

Tips to help avoid bad weather accidents
- Adjust speed and following distance for weather conditions
- Learn how to stop on slippery surfaces, how to correct a skid
- Keep equipment in good condition
- Keep windows clean
- Carry emergency equipment
- Warm up the engine before traveling
- Keep especially alert for pedestrians
- Turn lights on when visibility is reduced

Interstate Highways
Limited access highways have better accident rates than other roads because vehicles travel in the same direction at comparable speeds. Increased speeds can increase some hazards.

Some contributing causes of interstate accidents
- “Highway hypnosis”
- Slowing or stopping on ramps
- Lane changes without checking or signaling
- Following too closely
- Driving slower or faster than the pace of traffic
- Failure to adjust speed for conditions – traffic, weather, road, light
- Lane ends and construction

Tips to help avoid interstate accidents
- Plan ahead to avoid sudden decisions
- Use the acceleration lane to enter an interstate
- Check traffic and signal lane changes
- Maintain a safe following distance
- Drive with space around you
- Flow with the traffic
- Use rest stops to break routine

Driving Conditions
There are generally six basic conditions a driver may encounter:
1. Light
2. Weather
3. Road
4. Vehicle
5. Traffic
6. Driver

These conditions can help the driver recognize hazards and how to cope with them.
Night Driving
During night driving, you may not be able to see as well or as far as during day driving. Your vehicle may not be seen as well, either.

Some contributing causes of nighttime accidents
- Over-driving headlights
- Recovering from glare of oncoming headlights
- Not turning on headlights soon enough as darkness approaches
- Eye fatigue
- Vehicle lights in poor condition – dirty, out of adjustment or burned out
- Reflections from mirrors
- Pedestrians in dark clothing

Tips to help avoid night driving accidents
- Drive slower
- Use low beams when visibility is poor – at dusk, fog, rain or snow
- Inspect lights regularly and assure headlights are adjusted
- Keep eyes moving and avoid eye fatigue
- Look to the right side of the road to avoid glare
- Dim vehicle instruments lights
- Don’t drive with senses impaired

Presentation
- Introduce night driving topic
- The accident rate is 2.5 times greater at night than during the day
- What are some contributing causes of night driving accidents?
- How can drivers avoid night driving accidents?
- Summarize discussion

Driving Habits
Habits are easily formed, can be difficult to change. Recognizing one’s own bad habits is also difficult, but well worth the effort. Correcting one bad habit can save one bad accident.

Some bad habits that could contribute to accidents
- Failure to “keep your mind on driving” – daydreaming, preoccupation, etc.
- Failure to communicate – signals, lane changes, stopping
- Routines – familiarity of same route – failure to see the trees for the forest
- Failure to pre-check the vehicle
- Failure to plan, to allow time
- Failure to use seat belts
- Child restraints
- Assuming what the other driver will do
- Faulty driving
- Improper lane position
- Running the yellow, jumping the green or rolling stops
- One-arm driving
- Depending on mirrors instead of checking blind spots
- Poor attitude – always in a rush, impatient

Some good habits that could help avoid accidents
- Always buckle up:
  + Mandatory seat belts/child restraint laws
  + Airbags and seat belts
- Smith system:
  + Aim high in steering
  + Get the big picture
  + Keep your eyes moving
  + Leave yourself an out
  + Make sure they see you
- ID:
  + Identify the hazard
  + Decide what to do
  + Execute in time
  + Work on self improvement
  + Listen to what others have to say

Driver Fatigue
There are limitations to what a vehicle can do. There are also limitations to what a driver can do. While these limits vary by individual, professional drivers should know their limitations, and what to do about them. One of the most common limitations and one which contributes to accidents is driver fatigue.

Contributing causes of driver fatigue
- Carbon monoxide leakage into the vehicle
- Exceeding hours of service
- Adverse or demanding driving conditions
- Inadequate sleep
- Prescribed medications
- Alcohol
- Drugs
- Preoccupation – worry over personal problems
- Overeating

Effects of driver fatigue
- Slower reaction time
- Irritability or bad temper
- Careless decisions
- Loss of attention
- Reduced vision

Tips for helping to avoid driver fatigue
- Sufficient sleep
- Proper diet
- Rest stops
- Short walks or exercise

Avoid fatigue – do not fight it. Develop an attitude of alertness.

Presentation
- Introduce driver fatigue as a cause of accidents
- What are some contributing causes?
- Which are most critical?
- How does fatigue affect driving ability?
- How can a driver avoid fatigue?
- Summarize discussion

Backed
A way to help avoid backing accidents is to avoid backing. Unfortunately, this is not always possible. Backing is a hazardous maneuver. Professional drivers should be aware of backing hazards and know how to avoid them. Backing accidents may be prevented.

Contributing factors to backing accidents
- Failure to look immediately before backing
- Failure to check blind spots
- Failure to check clearances
- Full dependence on a guide or mirrors
- Operating different size vehicles
- Backing too rapidly
- Reduced visibility due to weather or light conditions
- Failure to set brakes; chock wheels

Some ways to help avoid backing accidents
- Plan ahead – avoid backing if possible
- Avoid backing to turn around
- Identify locations where backing should never be done
- Avoid backing unfamiliar vehicles
- Back out of traffic rather than into it
- Before backing, walk around vehicle to check for children, posts, hydrants, other vehicles; check clearances
- Use mirrors on both sides of the vehicle
- Use wide-angle mirrors
- Use a guide
- Use a back-up alarm on vehicles
- Look immediately before backing
- Set brakes; chock wheels
- Back slowly – keep alert – look
- Back in the right direction to provide most visibility

Presentation
- Introduce backing accident topic to drivers
- What are some of the causes of backing accidents?
- Which are most critical?
- Where are the blind spots?
- How can backing accidents be avoided?
- Summarize the discussion
Following
The following distance in front of the vehicle is a danger zone. The following distance must provide adequate space to react, slow and stop to avoid rear-ending the vehicle ahead. Adequate following distance varies with speed, size of the vehicle and driving conditions. Professional drivers should know their vehicles and allow a cushion of safe following distance.

Causes of rear-end collisions
- Following too closely or tailgating
- Lack of alertness
- Distractions
- Poor brakes or tires
- Road and weather conditions

Tips to help avoid rear-end collisions
- Be alert to the total traffic picture by scanning the area in your danger zone
- A safe following distance is one vehicle length for each ten miles per hour of speed
- Allow one second of following distance for each 10 feet of the length of your vehicle
- Passenger car = 20 feet = two seconds
- Straight truck = 30 feet = three seconds
- Tractor-trailer = 55 feet = six seconds
- Pick a fixed reference point over which you can time the travel of your vehicle. When the car ahead passes this point, start counting one thousand and one, one thousand and two, etc. The front of your vehicle should not pass this point until you have completed your count
- Know your slowing down and stopping distance
- Stopping distance is reaction distance plus the vehicle braking distance at the current speed
- The average reaction time for an alert driver is 3/4 to one second
- A vehicle travels about 1.5 times its speed in feet per second
- In 3/4 of a second the vehicle travels can be determined by adding the first digit of the speed to the last digit. For example:
  - Braking distance increases with the square of the speed. For example, if a vehicle can stop in 20 feet at 20 miles per hour, at 60 miles per hour or three times the speed, it will take nine times as far to stop or 180 feet. At 40 miles per hour or twice the speed, it will take four times as far to stop or 80 feet
- This assumes that vehicle is in good condition and the pavement is dry
- Know the condition of the equipment you are driving
- Adjust to the traffic flow and avoid sudden complete stops
- Add following distance, more time, when driving conditions are not normal – slick roads, heavy traffic, reduced visibility

Presentation
- Introduce following and rear-end accidents as the topic for discussion
- What are some of the causes of rear-end accidents?
- How can they be avoided?
- Emphasize reaction time, braking distance
- Explain how far a vehicle travels at any speed
- Explain how the timed interval method of determining following distance works
- Caution extra distance needed for adverse conditions
- Summarize the discussion
- Effect of anti-lock brake system
- Trucks: effect of disconnecting from tractor brakes

Intersections
Intersections have many hazards. They require “moments of decision.” Intersections present “who has the right of way?” discussions. The professional driver should know that the law never gives the “right of way” to anyone; the only one who can give it is the driver.

Some contributing causes of accidents
- Failure to yield the “right of way”
- Failure to reduce speed
- Failure to maintain a safe following distance
- Passing in the intersection
- Jumping or running traffic lights
- Ignoring blind spots – particularly on right turns with large vehicles
- Believing the other vehicle will stop for, or turn as indicated

Tips to help avoid accidents
- Yield the “right of way”
- Scan danger zones
- Maintain a safe following distance
- Cover brake and slow down when visibility is limited
- Avoid split-second decisions
- Show what you are going to do with signals and vehicle position
- Turn from the proper lanes

Passing
To help avoid passing accidents you need vision and space. Professional drivers also depend on experience.

Some contributing causes of accidents
- Passing on curves, hills, narrow roads, bridges
- Impatience
- Hesitation
- Limited visibility due to weather or light conditions
- Passing with adverse road conditions
- Driving while impaired
- Failure to signal

Tips to help avoid accidents
- Know your clear distance – vision and space
- Signal intention to pass
- Allow for sufficient acceleration space
- Help other pass safely
- Twelve points of passing from the National Safety Council (NSC)
  1. Is the pass necessary?
  2. Maintain a safe following distance
  3. Check traffic ahead
  4. Check traffic behind
  5. Signal
  6. Swing into left lane
  7. Accelerate
  8. Tap horn
  9. Check blind spots
  10. Return to lane
  11. Cancel signal and resume speed

Stopping/Parking
Accidents that occur while the vehicle is stopped or parked are often not so serious – fender benders – and some involve pedestrians. Some other losses include assault, robbery, vehicle theft and vandalism. Parking accidents should not be overlooked.

Some contributing causes of accidents
- Improper parking on an incline, illegal parking
- Pulling out from a parking spot into the path of another vehicle
- Opening a door in the path of another vehicle
- Poor visibility because of blind spots
- Leaving the keys in the vehicle or the engine running
- Isolated areas
- Poor lighting
- No security

Tips to help avoid accidents
- Park properly
- Signal
- Yield “right of way” in parking lots
- Check blind spots
- Reduce speed in parking lots
- Lock the vehicle and take the keys
- Set the brake and turn wheels to prevent roll-away

Presentation
- Introduce topic on parking
- What are some contributing causes of parking accidents?
- What are reasonable security precautions to take?
- How can a parking lot accident be avoided?
- Summarize discussion in your own words
- “Street Smarts”