

ACCIDENT PREVENTION AND COUNTERMEASURES



Harco National Insurance Company
Occidental Fire and Casualty Company of North Carolina
TransGuard Insurance Company of America
Wilshire Insurance Company

ACCIDENT COUNTERMEASURES

As part of the ongoing FHWA Safety Management effort to reduce the number of vehicle accidents on highways, assistance by Safety Specialists in accident analysis and countermeasures planning is now an integral part of compliance reviews conducted by the Office of Motor Carriers (OMC). Accident countermeasures are examples of Defensive strategies designed to reduce preventable accidents.

PREVENTABLE ACCIDENTS

ACCIDENTS AT INTERSECTIONS:

Preventable if:

- Driver failed to control speed so that he/she could stop within available sight distance
- Driver failed to check cross-traffic and wait for it to clear before entering intersection

PREVENTABLE ACCIDENTS

.....continued

- Driver pulled out from side street in the face of oncoming traffic
- Driver collided with person, vehicle, or object while making right or left turn
- Driver collided with vehicle making turn in front of him/her

STRIKING OTHER VEHICLE IN REAR

Preventable if:

- Driver failed to maintain safe following distance and have his/her vehicle under control
- Driver failed to keep track of traffic conditions and did not slow down
- Driver failed to ascertain whether vehicle ahead was moving slowly, stopped, or slowing down for any reason

STRIKING OTHER VEHICLE IN REAR.....continued

- Driver misjudged rate of overtaking
- Driver came too close before pulling out to pass
- Driver failed to wait for vehicle ahead to move into the clear before starting up
- Driver failed to leave sufficient room for passing vehicle to get safely back in line

SIDESWIPE AND HEAD-ON COLLISION

Preventable if:

- Driver was not entirely in his/her proper lane of travel
- Driver did not pull to right and slow down or stop for vehicle encroaching on his/her land of travel when such action could have been taken without additional danger

SIDESWIPE AND HEAD-ON COLLISION.....continued

- Driver was passing slower traffic near an intersection and had to make sudden stop
- Driver made sudden stop to park, load or unload
- Vehicle was improperly parked
- Driver rolled back into vehicle behind them while starting on a grade

SQUEEZE PLAYS AND SHUTOUTS

Preventable if:

- Driver failed to yield right-of-way when necessary to avoid accident

BACKING ACCIDENTS

Preventable if:

- Driver backed up when backing could have been avoided by better planning of his/her route
- Driver backed into traffic stream when such backing could have been avoided
- Driver failed to get out of cab periodically and recheck conditions when backing a long distance

BACKING ACCIDENTS

.....continued

- Driver depended solely on mirrors when it was practicable to look back
- Driver failed to get out of cab and check proposed path of backward travel
- Driver failed to check behind vehicle parked at curb before attempting to leave parking space
- Driver relied solely on a guide to help him/her back
- Driver backed from blind side when he/she could have made a sight-side approach

ACCIDENTS WHILE BEING PASSED

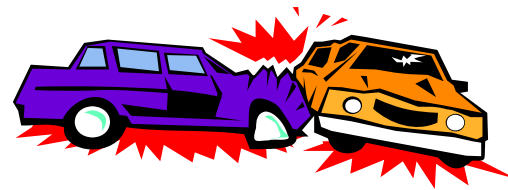
Preventable if:

- Driver failed to stay in his own lane and hold speed or reduce it to permit safe passing

ACCIDENTS WHILE ENTERING TRAFFIC STREAM

Preventable if:

- Driver failed to signal when pulling out from curb
- Driver failed to check traffic before pulling out from curb
- Driver failed to look back to check traffic if he/she was in position where mirrors did not show traffic conditions



ACCIDENTS WHILE ENTERING TRAFFIC STREAM.....continued

- Driver attempted to pull out in a manner that forced other vehicles to change speed or direction
- Driver failed to make full stop before entering from side street, alley, or driveway
- Driver failed to make full stop before crossing sidewalk
- Driver failed to yield right of way to approaching traffic

PEDESTRIAN ACCIDENT

Preventable if:

- Driver did not reduce speed in area of heavy pedestrian traffic
- Driver was not prepared to stop
- Driver failed to yield right of way to pedestrian

MECHANICAL DEFECTS ACCIDENTS

Preventable if:

- Defect was of a type that driver should have detected in making pre-trip or en-route inspection of vehicle
- Defect was of a type that driver should have detected during normal operation of vehicle
- Defect was caused by driver's abusive handling of the vehicle
- Defect was known to driver, but ignored
- Driver was instructed to operate with known defects

ALL TYPES OF ACCIDENTS

Preventable if:

- Driver was not operating at a speed suitable for the existing conditions of road, weather, and traffic
- Driver failed to control speed so that he/she could stop within assured clear distance



ALL TYPES OF ACCIDENTS.....continued

- Driver misjudged available clearance
- Driver failed to yield right-of-way to avoid accident
- Driver failed to accurately observe existing conditions
- Driver was in violation of company rules or special instructions, the regulations of any Federal or State regulatory agency, or any applicable traffic laws or ordinances

A SAMPLE OF NON PREVENTABLE ACCIDENTS

STRUCK IN REAR BY OTHER VEHICLE

Non Preventable if:

- Driver's vehicle was legally and properly parked
- Driver was proceeding in his/her own lane of traffic at a safe and lawful speed
- Driver was stopped in traffic due to existing conditions or was stopped in compliance with traffic sign or signal or the direction of a police officer or other person legitimately controlling traffic
- Driver was in proper lane waiting to make turn

MORE NON PREVENTABLE ACCIDENTS

STRUCK WHILE PARKED

Non Preventable if:

- Driver was properly parked in a location where parking was permitted.
- Vehicle was stopped, parked or left standing in accordance with Sections 392.21 and 392.22 of the Federal Motor Carrier Safety Regulations.

ACCIDENT PREVENTION AND COUNTERMEASURES

COUNTERMEASURE OBJECTIVE:

To reduce motor carrier fleet accident rates by establishing a company standard for safe driving.

DESCRIPTION OF A PREVENTABLE ACCIDENT

- A preventable accident is one which occurs because the driver fails to act in a reasonably expected manner to prevent it. In judging whether the driver's actions were reasonable, one seeks to determine whether the driver drove defensively and demonstrated an acceptable level of skill and knowledge. The judgment of what is reasonable can be based on a company-adopted definition, thus establishing a goal for its safety management programs.

PREVENTABLE ACCIDENT ON THE PART OF A MOTOR CARRIER MEANS:

- An accident that involved a commercial motor vehicle
- The accident could have been averted but for an act, or failure to act by the motor carrier, or the driver, the accident happened.



ACTION OF THE DRIVER

Note that the above definition of preventable accident is focused on the actions of the driver. It is the commonly used definition in evaluating driver performance. A broader definition, which can be used to evaluate the driver's and the motor carrier's actions, is given by the Federal Motor Carrier Safety Regulations as follows:

THE CONCEPT OF A PREVENTABLE ACCIDENT IS A FLEET MANAGEMENT TOOL WHICH ACHIEVES THE FOLLOWING

- It helps to establish a safe driving standard for the driver
- It provides a criterion for evaluating individual drivers
- It provides an objective for accident investigations and evaluations

THE CONCEPT OF A PREVENTABLE ACCIDENT IS A FLEET MANAGEMENT TOOL WHICH ACHIEVES THE FOLLOWING ...continued

- It provides a means of evaluating the safety performance of individual drivers and the fleet as a whole
- It provides a means for monitoring the effectiveness of fleet safety programs
- It assists in dealing with driver safety infractions
- It assists in the implementation of safe driving recognition programs

QUESTIONS FOR MANAGEMENT

- Does the company have a program for investigating accidents?
- Is there a company accident review board or committee?



QUESTIONS FOR MANAGEMENT....continued

- Has the company defined a standard for the safe driving performances of the drivers?
- Is the carrier's standard for safe driving performances sufficiently challenging such that it would serve to highlight areas for fleet safety improvement?
- Are the drivers instructed as to what the company standard for safe driving is?
- Are the drivers instructed about company procedure for evaluating the preventability of accidents?

DRIVER QUALIFICATIONS AND PERFORMANCE

Objective: To improve motor carrier fleet safety by recruiting qualified drivers and monitoring the performance of the driver.

- It is extremely productive to any fleet safety program to have careful new driver selection and adequate monitoring procedures for existing drivers.



QUESTIONS FOR MANAGEMENT

WHEN HIRING NEW DRIVERS

- Are recruiting efforts sufficient to attract an adequate number of qualified applicants for effective selection?
- Is there an established formal procedure for interviewing, testing and screening applicants?
- Is there a defined standard of skill and knowledge to be met by successful applicants?
- Are appropriate methods being utilized to check out previous employment history and references?

QUESTIONS FOR MANAGEMENTcontinued

- Is the prior driving record being checked?
- Are the applicants' physical qualifications checked?
- Are you monitoring existing drivers' qualifications?
- Is there a formal program for monitoring drivers' qualifications?
- Is there a periodic review of the driving record?

WHEN HIRING DRIVERS

- Is there a periodic review of the drivers' health?
- Are drivers monitored for drug and alcohol abuse?
- Is there a means for identifying deficiencies in drivers' skills and knowledge and a procedure for remedial training:
- Is there an established procedure for terminating unqualified drivers?



SAFE DRIVING RECOGNITION

The objective is to encourage safe driving and improve driver awareness of safety.

- Safe driving recognition or incentive programs should be an integral part of a formal fleet safety program.
- The program should identify superior driving.
- Select drivers as examples to be emulated by the rest of the fleet.
- Generate program internally within the company.
- Participate in a national safe driver award program, such as the National Safety Council or through an Insurance awards program.

QUESTIONS FOR MANAGEMENT

- Does the company have a formal safe driver recognition and incentive program?
- Is there participation in a company driver recognition program or in national awards programs?
- Does the company have a means for evaluating driver performance?



MANAGEMENT TIPS

Use safe driving recognition to:

- Encourage safe driving performance
- Heighten driver safety awareness
- Foster driver Professionalism
- Focus the monitoring of individual driver performance and skills
- Help monitor fleet performance and effectiveness of the fleet safety program

COMPANY DRIVER MANUALS

COUNTERMEASURE OBJECTIVE:

To improve fleet safety through improved communication.



DESCRIPTION

The company driver manual is a key communication link between the company and its drivers. It conveniently brings together information about the company, its policies and procedures. It is indispensable for training new drivers and is a handy reference for existing drivers. The manual should be progressively developed and continually updated.

QUESTIONS FOR MANAGEMENT

- Does the company have an updated manual for its drivers?
- Does the manual describe the fleet safety program?
- Does it set forth the carrier's standards for safe driving?
- Is the company procedure for review and classification of accidents included?
- Are the company's disciplinary procedures explained?
- Is the manual regularly reviewed and updated?

DRIVER TRAINING AIDS

COUNTERMEASURE OBJECTIVE:

To improve fleet safety through the use of training aids.



DESCRIPTION

- The number of driver training aids is so great that the problem is how to locate, select and evaluate the most appropriate ones for the company. It is important to determine what mix of audio-visual aids, posters, manuals, pamphlets and other literature is most effective in improving the company's training program. Advice is available from a number of organizations, including your Insurance Company.



QUESTIONS FOR MANAGEMENT

- Does the company have a safety program?
- Are audio-visual aids being utilized?
- Has a recent survey of available driver training aids been carried out by the company?
- What about retraining for meeting new regulations and license requirements?



MANAGEMENT TIPS

Remember the following sources of driver training aids:

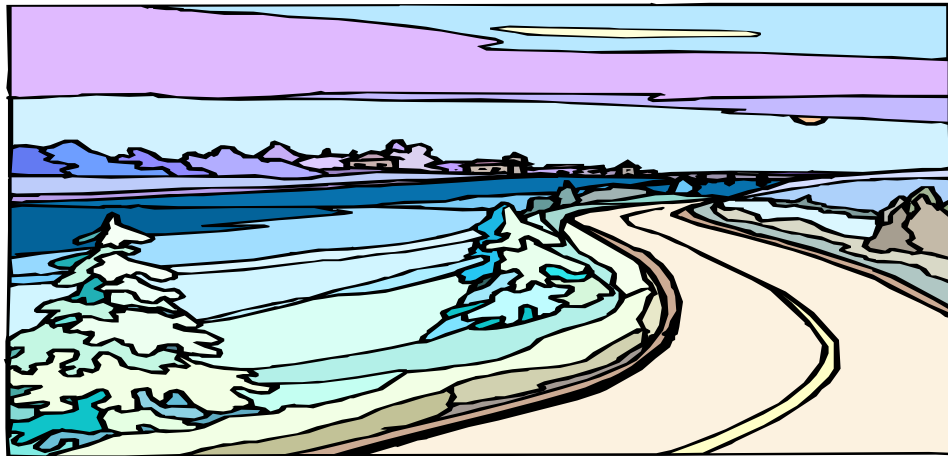
- Safety organizations
- Insurance companies
- Company in-house productions
- Private sector providers and consultants



PLANNING SCHEDULES, LOADS AND ROUTES

COUNTERMEASURE OBJECTIVE:

To maximize safe driving efficiency through planning at the dispatching level.



DESCRIPTION

Assisting the driver with pre-trip planning avoids overburdening the driver with unusual driving conditions caused by tight schedules, unusual cargoes, and unfamiliar or hazardous routes.



QUESTIONS FOR MANAGEMENT

- Are Hours-of-Service statutory regulations enforced?
- Are records of driver duty status maintained?
- Does the carrier have a means of forecasting available driver hours?
- Is dispatching planned to minimize the need for excessive on-duty schedules?
- Are tight schedules minimized and allowance made for adverse weather conditions?

QUESTIONS FOR MANAGEMENTcontinued

- Are dispatchers knowledgeable in matching cargoes with vehicles during dispatching?
- Are drivers instructed how to deal with sealed cargoes?
- How does the company handle the problems of overloading?
- How does the company instruct drivers with regard to improperly loaded or secured cargoes?

QUESTIONS FOR MANAGEMENT

- Are routes planned and drivers coached to avoid high hazard locations?
- Are schedules reviewed to ensure against Hours-of-Service violations?

DRIVER SAFETY INFRACTIONS COUNTERMEASURE

The objective is to improve fleet safety by remedial training or termination of unqualified drivers.

- Driving is a profession requiring skill, knowledge, physical and mental health and character as well as integrity.
- Public Safety and company reputation requires that drivers be fully qualified.
- Drivers who are not qualified should receive remedial training or be terminated if they cannot be brought up to the necessary level of competence.

QUESTIONS FOR MANAGEMENT

- Does the carrier have a formal review program for driver qualification?
- Do all the drivers meet the FMCSR qualification requirements?
- Does the company have a standard for safe driving?
- Is there a company policy for issuing reprimands and terminations?
- Is a progressive disciplinary action a feature of the policy?
- Are remedial training programs available?
- Is remedial training included in the progressive discipline?

DRINKING AND SUBSTANCE ABUSE

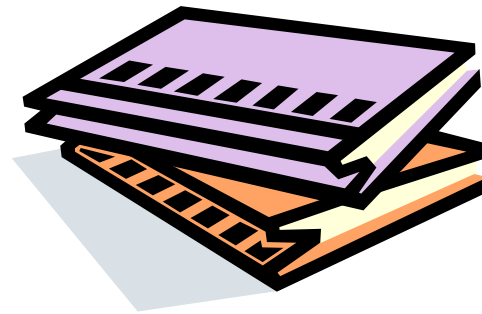
COUNTERMEASURE OBJECTIVE:

To prevent accidents caused by drivers under the influence by identifying and controlling abusers.



QUESTIONS FOR MANAGEMENT

- Are the driving records and references of new-hire applicants checked thoroughly for evidence of drinking or substance abuse problems?
- Has a written policy been established which stipulates countermeasures that will be followed when dealing with abusers?
- Has a formal policy been made known to all drivers?



QUESTIONS FOR MANAGEMENT

.....continued

- Do drivers' immediate supervisors and dispatchers know how to identify personnel under the influence?
- Are immediate supervisors and dispatchers motivated to notify management about problem drivers?
- Has management educated drivers about the ways in which drinking and substance abuse affect driving performance?



QUESTIONS FOR MANAGEMENT

.....continued

- Does the company have a list of references and potential sources for help available to drivers?



MANAGEMENT TIPS

- Be aware of marked changes in work behavior, personal relations, emotional moods and appearance of your drivers.
- Immediate supervisors are in the best position to observe unusual driver behavior.
- Do a thorough job in screening applicants regarding drinking and substance abuse.
- Your company can't afford to deal with the problems abusers will give you.

MANAGEMENT TIPS

.....continued

- Don't drink and drive.
- Don't abuse drugs, legal or illegal.
- Find out if prescription or over-the-counter medications may adversely affect safe driving.
- Get help fast if you have, or think you may have an abuse problem.

ILLNESS AND FATIGUE

COUNTERMEASURE OBJECTIVE:

To prevent accidents caused by ill and fatigued drivers through the use of common sense and by compliance with FMCSR regarding physical qualifications and hours-of-service.



DESCRIPTION

Everyone understands how ill or fatigued drivers can be a hazard to themselves and others. Nonetheless, drivers sometimes push their bodies beyond reasonable limits and become a hazard anyway. This is why comprehensive federal regulations have been established. In addition to being the law, these regulations are useful guides to both the driver and his supervisors in defining reasonable, sensible limitations on when medical conditions or duty status calls for rest and no driving.



QUESTIONS FOR MANAGEMENT

- Are supervisors fully aware of all the FMCSR which relate to physical qualifications, medical examinations and hours-of-service?
- Are maximum on-duty driving times clearly spelled out to your drivers?
- Do you cross-check driver-logs with odometer readings, fuel receipts and weight scale tickets?

QUESTIONS FOR MANAGEMENT

.....continued

- Do you use tachographs or on board trip computers if you suspect driver violations?
- Have drivers been explicitly informed how violations will be dealt with?



DRIVING TIPS

- Don't start a long trip unless you get a good sleep before you go.
- When possible, schedule your trips so that you drive when you are normally awake and when you normally sleep.
- Don't throw off your body clock more than necessary.
- Be careful of any kind of medication. Many medicines can make you drowsy and sleepy.



DRIVING TIPS.....continued

- If you get drowsy, don't drive. You're asking for problems. At least take a short nap until you can drive somewhere to get a good sleep.
- Never pull off of the side of the road and become a "sitting duck"
- Many drivers think that the entrance or exit ramp to rest areas are a good place to park, however many accidents have occurred because drivers failed to recognize the hazard.

FLEET SAFETY PROGRAM AND SUPERVISION

COUNTERMEASURE OBJECTIVE:

To improve safe driving performance with an effective fleet safety program.

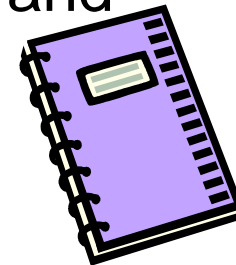


DESCRIPTION

Fleet safe driving performance is dependent on management commitment to the implementation of a formal fleet safety program. An effective safety program will interact with most aspects of fleet operations and challenge the skills and knowledge of its supervisors and drivers.

QUESTIONS FOR MANAGEMENT

- Is there a formal fleet safety program?
- Does your fleet safety program provide the framework for safety management to recruit and screen new drivers?
- Do you monitor driver qualifications and safety infractions?
- Provide training to upgrade driver skills and knowledge?
- Provide a formal mechanism for investigating and reviewing accidents?



QUESTIONS FOR MANAGEMENT

- Do you implement safe driving incentives?
- Do monitor maintenance and equipment safety?
- Do you oversee and implement regulatory compliance?
- Have you established carrier safety standards?
- Do you communicate program goals to drivers and supervisory personnel?

QUESTIONS FOR MANAGEMENT

.....continued

- Do you monitor program effectiveness?
- Do you offer recognition to drivers who meet the required standard of performance?
- Is there a designated person with responsibility for safety and compliance with regulations?
- Is the safety director given an opportunity for professional development by attending training seminars and industry association meetings?
- Does the company and its supervisory staff maintain membership and remain active in trade and professional associations?

REVENUE NECESSARY TO PAY FOR ACCIDENT LOSSES

It is necessary for a motor carrier to generate an additional \$1,250,000 of revenue to pay the cost of a \$25,000 accident, assuming an average profit of 2%. The amount of revenue required to pay for losses will vary with the profit margin as shown on the following slide

REVENUE REQUIRED TO COVER LOSSES DUE TO ACCIDENTS

YEARLY ACCIDENT COST	Profit Margin 1%	Profit Margin 2%	Profit Margin 3%	Profit Margin 4%
\$ 1,000	\$ 100,000	\$ 50,000	\$ 33,000	\$ 25,000
\$ 5,000	\$ 500,000	\$ 250,000	\$ 167,000	\$ 125,000
\$ 10,000	\$ 1,000,000	\$ 500,000	\$ 333,000	\$ 250,000
\$ 25,000	\$ 2,500,000	\$ 1,250,000	\$ 833,000	\$ 650,000
\$ 50,000	\$ 5,000,000	\$ 2,500,000	\$ 1,667,000	\$ 1,250,000
\$ 100,000	\$ 10,000,000	\$ 5,000,000	\$ 3,333,000	\$ 2,500,000
\$ 150,000	\$ 15,000,000	\$ 7,500,000	\$ 5,000,000	\$ 3,750,000
\$ 200,000	\$ 20,000,000	\$ 10,000,000	\$ 6,667,000	\$ 5,000,000

ACCIDENT COSTS CONSIST OF ANY/OR ALL OF THE FOLLOWING:

- Vehicle Damage
- Loss of Revenue
- Administrative Costs
- Towing
- Storage of Damaged Vehicle
- Damage to Customer Relationships
- Legal Fees

ACCIDENT COSTS CONSIST OF ANY/OR ALL OF THE FOLLOWING.....continued

- Police Reports
- Cargo Damage
- Possible Effects on Cost of Insurance
- Possible Effect on cost of Workmen's Compensation Insurance
- Customer's Loss of Revenue Directly Attributable to the Accident

THANK YOU

As part of the IAT Loss Prevention Team, we would all like to give our sincere thanks for taking time out of your busy schedule to review this accident prevention material.