



Moving and Storage Industry Safety and Claim Prevention Manual

Table of Contents

<i>Section</i>	<i>Page No.</i>
1 Fleet Safety	3
2 Cargo Security & Warehouse Loss Prevention	32
3 Property Loss Control	39
4 General Liability	49
5 Special Topics	54
Cargo and Warehouse Evaluation Tips	
Forklift Safety	
Self-Inspection Program	
6 Accident/Incident Investigation	68
7 Safety Resources	75

Introduction

The **Moving and Storage Industry Safety and Claim Prevention Manual** was developed by **TRANSGUARD** solely for the benefit and use of insurance program participants.

This guide is designed to be a permanent reference source for loss prevention and control information and assistance. It contains excellent suggestions for developing, implementing and monitoring a customized safety and loss control program for your operations. This guide can also be used to supplement an existing program.

If you want to reduce operating expenses and insurance costs over the long term you must concentrate on loss prevention - it provides the best return on investment. Guidance includes topics such as fleet safety, property, general liability, cargo handling, accident investigation, etc.

In summary, an effective loss prevention and control program is one that is both dynamic and is actively supported by top management. Authority to direct daily safety activities can be delegated; however, the program's success will be in direct proportion to management's commitment and involvement. A program having active management support and dedication of the required resources will result in improved bottom line profit.

Section 1

Fleet Safety Guidelines

	<i>Page No.</i>
<i>Introduction</i>	<i>4</i>
<i>Driver Selection & Checking An Applicant's Past Record</i>	<i>7</i>
<i>Physical Qualifications</i>	<i>8</i>
<i>Driver Testing and Alcohol And Drug Testing Of Commercial Drivers</i>	<i>10</i>
<i>Driver Responsibility</i>	<i>16</i>
<i>Commercial Motor Vehicle Act Of 1986</i>	<i>18</i>
<i>Company Operating Policy</i>	<i>18</i>
<i>Driver Qualification Files</i>	<i>19</i>
<i>Motor Vehicle Records</i>	<i>20</i>
<i>Vehicle Accident Review</i>	<i>22</i>
<i>A Guide To Determining The Preventability Of Accidents</i>	<i>23</i>
<i>Accident And Incident Documentation</i>	<i>27</i>
<i>Vehicle Condition And Maintenance</i>	<i>27</i>
<i>Sample Forms</i>	<i>29</i>

Fleet Safety Guidelines

Introduction

Controlling vehicle accidents, theft and vandalism in the moving and storage industry is a true challenge. Drivers work under limited supervision and must share the road with other drivers. Maintaining high caliber vehicle operators and equipment will reduce accident frequency and severity resulting in improved efficiency. Training employees in defensive driving techniques reduces their dependency on the action of other drivers, weather and road conditions. Holding drivers accountable for their actions provide incentive, to not only do a good efficient job, but to do it safely.

The type program needed to control motor vehicle losses depends on fleet type, size and geographic areas traveled. However, any program, simple or complex, should address the following:

- Safety Policy Statement
- Driver Selection
- Fleet Safety Program Coordinator
- Written Accident Reporting Procedures
- Accident Review Committee/Fleet Safety Committee
- Job and Safety Training
- Inspections
- Preventive Maintenance
- Driver Safety and Incentive Awards

Safety Policy Statement

The safety policy statement should express management's concern for safety and serve as a guide for the safe conduct of fleet activities by management and employees. The statement should be signed by the owner/president of the company and be well publicized throughout the organization (*Refer to the sample safety policy at the end of this section*).

Driver Selection Criteria

The establishment of a meaningful and realistic driver qualification program is vitally important to the successful operation of any fleet. A well-established driver selection process will assist a company in finding the best available drivers. A good driver selection program should, at a minimum, cover the following:

- written application of employment
- reference checks
- prior employment inquiries
- valid license check
- motor vehicle records (MVR) check
- road test

Operations subject to Federal DOT regulations are required to do the following in addition to those items mentioned above:

- physician certificate

- certificate of road test
- certificate of written test

All of these items, including current MVR's should be in individual driver files.

Fleet Safety Program Coordinator

A fleet safety coordinator should be named and be given overall responsibility for ensuring success of the program. This person should be knowledgeable in matters pertaining to fleet safety activities.

Written Accident Reporting Procedures

Management of any motor fleet hopes their drivers are trained well enough to avoid becoming involved in an accident. Since there is no way to guarantee that an accident will not occur, proper procedures to follow in the event of an accident should be established.

Since the involved driver may be under extreme stress at the accident scene, it is important to develop accident procedures that are clear and concise. A driver's initial actions are often critical to minimizing the effects of an accident. These procedures should cover:

- who to inform (company official) in event of an accident
- information that should be exchanged
- things that should not be said (such as an admission of fault)
- how to adequately complete an accident report

Accident Review Committee/Fleet Safety Committee

Every accident results in a reduction of company assets, through both lost time and money. The purpose of an accident review committee is to determine the causes of accidents and take actions necessary to hopefully prevent reoccurrence. The committee also identifies accident trends that might indicate a need to educate or train drivers.

The committee should have a representative from management as well as drivers. The members should be familiar with the concepts of defensive driving and preventable accidents.

Job and Safety Training

An objective of all fleet operations should be safe and efficient drivers. The development of safe and efficient drivers can only be accomplished through effective job and safety training. An effective training program should include:

- overall review of operations
- safety rules and procedures
- equipment /material handling procedures
- accident reporting guidelines
- training in conducting pre and post-trip inspections
- procedures for reporting items needing repair or replacement
- training in areas the driver may be deficient (e.g., backing)

Inspections

The establishment of effective vehicle inspection procedures is crucial to a fleet loss control program. An inspection program helps keep vehicles in good operating condition by detection of problems before they become a major repair expense and before they result in an accident.

Pre-trip and post-trip inspections of vehicles are actions that can be used to detect items needing adjustment, repair, or replacement. The size and method of operations of a particular fleet must be considered to determine if one or both types of inspections should be conducted. Drivers should be furnished a checklist outlining each item to be inspected. Any conditions considered inherently dangerous should be corrected before a vehicle is placed in operation (*See sample form at the end of this section*).

Preventive Maintenance

Preventive maintenance of vehicles is necessary to ensure vehicle dependability and safety, as well as achieve maximum vehicle life. A preventive maintenance program should be based on a set schedule, of mileage or hours of service, suited to the type of vehicle and its use.

Driver Safety and Incentive Awards

Active employee participation and maintaining a high level of employee interest in the fleet safety program is vital to the program's success. Rewarding drivers for maintaining excellent driving records is one method of motivating them to operate in a safe manner. In addition to money, awards could be plaques, belts, jackets and special dinners. To be most effective, awards should be presented by top management.

Personal use of company vehicles

A company policy should be established regarding the personal use of company vehicles. Ideally the policy should not allow vehicle use for non-business related activities. If vehicles are to be used for non-business purposes, driving should be restricted to the employee and his or her spouse.

Vehicle Storage

Care should be taken to select a yard area on hard, dry level ground. It should not be exposed to flooding or fire. It should provide ready and safe access to the highway and the access should be adequately marked and protected. The yard should be fenced, lighted and a watchman provided as conditions require. Keys to all units should be removed and retained at locations that can be protected and keys controlled.

If inside vehicle storage is provided, the building should be in sound physical condition with adequate fire protection. Automatic sprinkler protection is recommended and construction should be non-combustible or fire resistant.

The following pages provide more detail and can be tailored to your particular needs.

Driver Selection

Driver selection is a system of fact finding and analysis which evaluates each applicant's abilities, knowledge, and attitudes that are vital to success of the job and company. It is a search for the best and most efficient employee through the process of elimination of less qualified applicants.

Selection Procedures

The selection process encompasses a number of steps that are outlined below in the order in which they should be carried out.

Preliminary Screening

The selection process is a detailed search of an applicant's background and a study of their attitude, knowledge, and abilities. Because of the time and effort involved, each phase of the process should be carried out only if the applicant qualifies in the preceding phase.

Application for Employment

A completed employment application is the applicant's personal record, signed by them. It serves as the basis for all investigative activity to determine whether or not the applicant should be hired.

An employment application should be routinely completed by every job seeker. If an applicant is not hired at the time, the application should be kept on hand for one year. In this way, the information is available if an opening occurs at a later date. If the applicant is hired, the employment application becomes part of the basic personnel file.

The application should contain questions which elicit basic biographical information, current family status, general physical condition and history, past employment, references, education, experience and qualifications. The driver selection process demands additional information concerning license, license endorsements, types of equipment driven, accident record and record of traffic violations.

The Interview

The interview is a period of conversation with an applicant to develop detailed information concerning their qualifications and experience. It will also help determine their general suitability as an employee and provide additional background information.

A standard interview pattern should be followed for a given job classification. This will assure that all desired information is obtained while affording a standard of comparison between applicants.

Checking an Applicant's Past Record

Previous Employers-Written Check

Companies who employ drivers have mutual interests in the selection of suitable employees. Reference checks with an applicant's previous employers are important and can help determine past on-the-job performance. A written request for information from previous employers is advisable. A stamped, self-addressed return envelope should be enclosed to make the reply as simple as possible.

It is sometimes difficult to obtain information from past employers for liability reasons. To offset this,

the form used for requesting information from previous employers contains a release. It should be signed by the applicant authorizing former employers to furnish information without liability.

Previous Employers-Telephone Check

It is sometimes helpful to contact past employers by telephone to check an applicant's record. This is especially true when attempting to meet immediate manpower needs. A telephone reference check may also be used to overcome a previous employer's reluctance to put information in writing. The information obtained by a telephone check should be documented. A slightly different form is used for phone reference checks since generally more information can be obtained.

Driving Record

A motor vehicle record (MVR) check of all drivers is required. This check should be initiated prior to employment and new drivers should be placed on a probationary status until receipt and final determination of qualification. It may be useful to request applicants to bring a current MVR (within 90 days) when advertising or arranging an appointment. MVR's should be obtained for all operators of company motor vehicle, including salespersons operating private passenger automobiles and forklift operators. *Refer to page 1-22 for more detailed information about using MVR's as driver selection criteria and for application of a driver disciplinary program.*

Other Investigations

Although not required, it is desirable to conduct other background investigations of job applicants. A credit check should be made to determine whether or not there are financial problems. Investigations are subject to the requirements of the Fair Credit Reporting Act of 1972. If investigations are to be made by an outside agency, the applicant must be advised in writing: 1) that such report(s) will be sought; 2) the type of information to be sought; and 3) that if employment is denied because of the information furnished in the report(s), the applicant must, on request, be furnished with the name and address of the agency which provided the information.

These requirements can be met by providing a notice attached to the application form to be signed and dated by the applicant.

Physical Qualifications

Ideally drivers of commercial vehicles should be given a physical examination before hiring. Department of Transportation regulations (DOT) regarding driver physical fitness standards should be followed. All examinations should be conducted by the company physician or clinic. For all examinations, the physician or clinic should be advised in writing as to job duties of the applicant. (It is recommended that all drivers be given physicals annually.)

Major emphasis should be evaluating the ability of an applicant (or present employee), to do their job in such a way that they will not endanger themselves or others. This is particularly important if drivers are required to handle large vehicles under all kinds of conditions.

The recording of a medical history is an essential part of any physical examination. The examining doctor should be instructed to request information concerning an employee's previous accident and injury experience both on and off the job. A history of accidents and injuries is an indicator of a person who may disregard safety. It may also indicate an employee with a physical condition which may become aggravated and result in worker's compensation claims. The examining physician should be requested to

determine if the applicant is capable to safely perform the job.

Driver Physical Requirements

Drivers of commercial vehicles should meet DOT standards at the time of employment and continue to meet DOT standards throughout their employment. DOT driver physical requirements are summarized as follows:

- No loss of foot, leg, hand, or arm
- No impairment of the use of a foot, leg, arm, hand, fingers or any other structural defect or limitation likely to interfere with safe driving
- No diabetic condition currently requiring insulin for control
- No heart condition of a type known to be accompanied by loss of consciousness, collapse, or cardiac failure
- No respiratory condition likely to interfere with the ability to drive safely
- No high blood pressure condition likely to interfere with the ability to drive safely
- No rheumatic, arthritic, orthopedic or other muscular or vascular condition likely to interfere with safe driving
- No epileptic or other condition likely to cause sudden loss of consciousness or the ability to control a motor vehicle
- No mental, nervous, organic or functional disease, or any psychiatric disorder likely to interfere with safe driving
- Distant visual acuity of 20/40 (Snellen) in each eye, with or without corrective lenses; side vision of at least 70 degrees in each eye; the ability to distinguish the colors red, yellow, and green
- Can hear a forced whisper at a distance of at least 5 feet, with or without hearing aid or can pass a prescribed audio-metric test, with or without a hearing aid
- Is not a user of amphetamines, narcotics or habit-forming drugs
- Is not an alcoholic
- A drug and alcohol screen should be required

Additional Physical Requirements

Persons with certain types of deficiencies could have an unfavorable accident experience resulting in risk to the public and other employees. In other instances, pre-existing conditions, which may be aggravated by job demands, could result in workers' compensation claims. In either case, it is desirable to screen out such individuals.

Conditions requiring particular attention include:

- *Emotional Stability* - A recent history of hospitalization for mental illness or nervous disorder should be disqualifying for job applicants. Drug therapy should be disqualifying until it is determined whether or not drugs will affect the ability to work safely. Information from other sources should be reviewed carefully for indications of instability and unsafe conditions.
- *Neurological Defects* - Convulsive disorders such as epilepsy present too great a risk to permit an applicant to operate a commercial vehicle. Neurological diseases, such as multiple sclerosis, which affect muscular control and coordination also, disqualify any person from driving a commercial vehicle.
- *Cardiovascular Disease* - With certain limited exceptions, which must be carefully evaluated by a physician, cardiovascular disease and related abnormalities are disqualifying for driving jobs or

other jobs involving heavy work. Fixed hypertension may be disqualifying if it interferes with a driver's ability to operate safely.

- *Metabolic Disease* - Diabetes is the most important. If insulin is required the condition is disqualifying for driving. If the condition is controlled by diet alone, and there are no complications, driving may be permitted. If oral medication is required, individual evaluation is recommended. In any case, the diabetes must be controlled, the individual must be closely supervised by his own physician and the individual must have an understanding of their condition.
- *Syncope and Fainting* - There are a number of conditions which might precipitate sudden loss of consciousness. The finding of any of these conditions is disqualifying.
- *Structural Defects* - Hernia, enlarged inguinal rings, and back injury are of concern from the standpoint of aggravating a pre-existing condition with the likelihood of excessive compensation costs. Such findings in a job applicant are generally disqualifying. In-service employees with hernia should be urged to get prompt medical care. Any other physical condition interfering with the proper operation of the controls of a vehicle, or which hinders an employee in the performance of their regular duties is disqualifying.

Driver Testing

The driver selection process should include a written examination and actual road testing to confirm a person's job knowledge and the ability to handle the equipment driven.

Obtain a copy of the Federal Motor Carrier Safety Regulations, Part 391 for specific requirements pertaining to qualifying drivers of commercial vehicles. An easy to use reference is available from JJ Keller & Associates, Inc (Refer to Section 7, Safety Resources).

Alcohol and Drug Testing of Commercial Drivers

The federal government issued regulations that require employers of commercial motor vehicle operators to implement alcohol and controlled substances testing programs. These programs are expected to help prevent accidents and injuries resulting from the misuse of alcohol and drugs by drivers of commercial motor vehicles. Nearly seven million drivers are covered by these regulations. A summary of the regulations and responses to some commonly asked questions follows.

The current regulations, applied to both interstate and intrastate transportation, and require drivers of commercial motor vehicles to be tested for certain drugs. Alcohol testing programs are also required.

Only minor changes have been made to the provisions of the drug-testing program that has been in effect for interstate drivers since 1989. In brief, the tests analyze a urine sample of the driver's for five types of controlled substances: marijuana, cocaine, opiates, amphetamines and phencyclidine. The testing program must include pre-employment, periodic (biennial), reasonable cause, post accident and random testing. A screening test and a confirmatory test (to confirm a positive result on the first test) are required. Employees for whom both tests are positive are considered medically unqualified to operate (or assist in other duties related to vehicle operation, such as loading) a commercial motor vehicle. A driver remains unqualified to operate a commercial vehicle until it is medically certified that the driver is free of the listed drugs.

The regulations related to alcohol prohibit employees from performing safety-sensitive functions (e.g., driving):

- when test results indicate an alcohol concentration of 0.04 or greater;
- within four hours after using alcohol;
- while using or possessing alcohol on the job;
- during the 8 hours following an accident if the driver's involvement has not been discounted as a contributing factor in the accident or, until the driver is tested; and
- if the driver refuses to submit to required alcohol tests.

If an employee is found to have misused alcohol (as defined above), the employee cannot be returned to a safety-sensitive function until, at a minimum:

- That person undergoes evaluation by a substance abuse professional (SAP) and, if necessary, rehabilitation;
- Return-to-duty test indicates alcohol concentration below 0.02.

There are other restrictions if an employee is found to have an alcohol concentration between 0.02 and .039, or if the employee is under the influence of or impaired by alcohol. Being under the influence or impaired can be indicated by behavior, speech, performance or body odor if an alcohol test cannot be readily obtained. These restrictions are noted in the discussion below.

An alcohol-testing program encompasses six elements.

- **Pre-employment testing** - Employees must be tested before performing safety-sensitive functions for the first time. There are a few exceptions to this requirement. For example, if the employer can obtain from a prior employer a negative result from a test that was conducted in the last six months.
- **Post-accident testing** - As soon as practicable following an accident, the driver of a commercial vehicle must be tested if there was loss of life or the driver was cited for a moving traffic violation. The regulations require a written explanation if such a test cannot be performed within 2 hours of the incident.

If a test cannot be performed within 8 hours of the incident, efforts to have the driver tested should cease and the employer should document the reasons why the test could not be performed.

- **Random testing** - Employers are required to randomly test at least 25% of their employees, who are covered by the regulations, annually. This percentage rate may be changed annually by the government (depending upon the percentage of positive tests reported by all employers).
- **Reasonable suspicion testing** - A driver must be tested if the employer has reasonable suspicion to believe that the driver is in violation of the prohibitions related to alcohol use.

Reasonable suspicion must be based on specific observations concerning the appearance, behavior, speech or body odors of the driver. The observations must be made by a supervisor or company official who is trained in recognizing the short-term indications of alcohol misuse. The observation must be made during, just preceding, or just after the period of the workday that the driver is required to be in compliance with the regulations. The person who makes the determination that reasonable suspicion exists to conduct a test, cannot administer the test. The latter provisions are intended to prevent the harassment of specific employees.

If a test cannot be completed within two hours of the observed suspicious behavior, the employer must document the reasons for failing to administer the test promptly. After a determination of reasonable suspicion, a driver may not go "on-duty" (e.g., driving, loading) until a test has established that the alcohol level is below the 0.02 threshold. If a test cannot be administered within 8 hours of the determination (of reasonable suspicion), the driver cannot go on-duty until 24 hours have elapsed following the determination.

- **Return-to-duty testing** - An employee who has engaged in conduct that is prohibited must be tested (and found to be below the 0.02 threshold) before the employee can return to duty.
- **Follow-up testing** - An employee who must be referred to an SAP (for misusing alcohol) is subject to unannounced follow-up alcohol testing, as directed by the SAP. There must be a minimum of 6 tests in the first twelve months following the driver's return.

The major provisions of the regulations are identified above. Below are some common questions about the regulations and responses that we believe are appropriate.

Who must be tested?

All employees who must have a Commercial Driver's License (CDL) to operate a vehicle for the insured business are covered by the regulations and must be tested. A CDL is needed for vehicles over 26,000 pounds (gross vehicle or combination weight), vehicles that transport 16 or more people, and all vehicles that transport placarded quantities of hazardous materials.

When did the regulations go into effect?

Employers with 50 or more drivers on March 17, 1994, must have implemented a program by May 1, 1995. All other employers must have implemented the program by January 1, 1996.

What is a safety-sensitive function?

Safety-sensitive functions include driving, loading and unloading, inspecting, servicing or repairing a commercial vehicle. Mechanics who possess a CDL and operate a commercial vehicle on public roads (for example, on test drives) are covered by the regulations.

What type of alcohol testing is required?

As with drug testing, two tests are required to confirm a positive alcohol result. The screening test must be conducted using a breath-testing device on the National Highway Traffic Safety Administration's Conforming Products List (NHTSA CPL).

The confirmation test must be conducted using an evidential breath testing device (EBT) also on the NHTSA CPL, that is capable of printing each test result and air blank (test of ambient air), and sequentially numbering each test. Other test methods are expected to be approved by the government.

The tests must be administered by breath alcohol technicians (BATs) who must meet training requirements set forth in the regulations. There are quality assurance requirements for the EBTs as well.

Do we have to test every applicant for a commercial driver's position?

No. Although the regulations use the term "pre-employment testing" the intent is to test an employee prior to their first assignment as an operator of a commercial vehicle (or other related assignments). Employers can evaluate an applicant for a position using other criteria, and make a conditional offer of employment (subject to passing alcohol and drug tests).

Note that the Americans with Disabilities Act (ADA) might place restrictions, in some cases, on the approach suggested here. For example, alcoholism (medically diagnosed) is one of the disabilities protected by ADA (drug dependency is not). However, Federal regulations prohibit drivers having a

current medical diagnosis of alcoholism from operating vehicles in interstate commerce. Therefore, if the applicant were applying for a position that required interstate vehicle operations, the employer would not likely be required to make reasonable accommodations (in compliance with the ADA), if the written job description included a requirement to operate vehicles in interstate commerce. The situation is less clear if the same applicant were applying for a position that involved only intrastate operation (the requirements for a CDL do not exclude persons suffering from alcoholism). It is best to seek qualified legal advice in these cases.

Do we have to pay for the services of a SAP and for rehabilitation of an employee who has tested positive for alcohol (or drugs)?

No. Employers are not required to provide or pay for rehabilitation or to hold a job open for an employee who has tested positive. However, an affected employee must be advised of available resources for evaluation and treatment of alcohol problems, including the names, addresses and telephone numbers of SAPs and counseling and treatment programs. No such duty is owed an applicant whose pre-employment test is positive.

Who are SAPs?

Substance abuse professionals may be licensed physicians, limited to medical doctors and doctors of osteopathy; licensed or certified psychologists, social workers and employee assistance professionals; and alcohol and drug abuse counselors certified by the National Association of Alcoholism and Drug Abuse Counselors Certification Commission.

What type training must be provided for supervisors to help them recognize "reasonable suspicion" behavior?

Persons designated to determine whether reasonable suspicion exists to require an alcohol test, must receive at least 60 minutes of training related to the physical, behavioral, speech, and performance indicators of probable alcohol misuse, particularly those associated with lower concentrations of alcohol. (Additional training will be necessary for the recognition of drug related problems.) *Attached as Exhibit 1 is a sample form -- "Report of Performance or Behavior Incident"-- that may be used to help document reasonable suspicion behavior.*

Are there any requirements for training or education of employees?

Classroom training is not specifically required. However, all employers were required to have policies covering the misuse of alcohol and controlled substances by January 1, 1996. Employees must be provided with written materials describing those policies. If these policies go beyond the requirements of the Federal regulations, such additional requirements must be clearly identified. These policies should contain a requirement for employees to report any use of prescribed medication that may generate a "false positive" test. *Attached as Exhibit 2 is a sample form-- "Notice of Prescribed Medication Use"-- that may be used by employees to document the use of prescription medication.*

The regulations are codified at Title 49, Code of Federal Regulations, Parts 382, 391, 392 and 395. The technical procedures for alcohol testing (to ensure accuracy and confidentiality) were incorporated into 49 CFR Part 40, which also contains drug-testing protocol.

Exhibit 1

Report of Performance or Behavior Incident

Name of employee observed: _____

Person who observed the incident: _____

Time and date of incident: _____

Length of time observed: _____

Details of incident (describe the employee's actions)

Name of witnesses:

Action taken by supervisor or other responsible person:

Name of person preparing this report: _____

Exhibit 2

Notice of Prescribed Medication Use

TO: _____
(Name of Supervisor)

FROM: _____
(Name of Employee)

In accordance with the Company's policy concerning safety on the job, please be advised that I am currently taking and possessing while of the job, the following prescription drug that has been prescribed to me for a valid medical purpose:

Name of drug: _____

Prescription number: _____ Prescription date: _____

Prescribing physician's name: _____

This drug produces the following side effects:

☐ Dizziness ☐ Drowsiness
☐ Nausea-Other: _____

My use of this drug is:

☐ Temporary and is expected to end on or about: _____
☐ Indefinite
☐ Permanent

I hereby give my consent for the above named prescribing physician to answer questions about my use of this drug.

(Employee Name) (Employee Signature) (Date)

Driver Responsibility

Drivers are expected to operate their vehicles in a safe manner and drive defensively. Discourteous driving and accidents create negative impressions and must be avoided. Employee attitude and driving habits should reflect a professional company image.

Vehicle operators should be trained in defensive driving techniques as part of their orientation. There are four situations that cause most accidents. Drivers should be aware of these and avoid them when possible:

- **Following Too Close** - A truck will not stop in the same distance as a car. A fully loaded truck reacts differently than an empty truck, drivers should adjust accordingly.
- **Backing Accidents** - Backing accounts for the most frequent type of accident and should be avoided whenever possible. The following guidelines (*also see the following page which can be reproduced and provided to drivers*) should be followed when backing is absolutely necessary: drivers should get out of the vehicle and walk around it, check for other vehicles, fixed objects, top and side clearances. They should plan about leaving, leave an "out" when they park, back into a space upon arriving to avoid backing out. Use a spotter whenever possible; do not hesitate to request help. Back slowly, it allows better vehicle control. Use both mirrors during backing, however when judging distance do not rely on mirrors since they may distort accuracy.
- **Intersection Accidents** - Many accidents occur at intersections where the actions of other drivers should be observed. Do not run yellow lights assuming other drivers will yield the right of way.
- **Driving Too Fast For Conditions** - Do not try to make up time by driving fast. Studies have shown the time savings is negligible and the possibility of having an accident increases dramatically with speed. Adjusting for weather conditions is also important. Allow more time when poor driving conditions such as rain or snow exist. Driving too fast for conditions contributes to over 70% of all vehicle accidents.

WHEN YOU *MUST* BACK YOUR VEHICLE.....

Remember the following guidelines for SAFE BACKING:

Walk around your vehicle

- Check for other vehicles
- Check for fixed objects
- Check top and side clearances

Think Ahead

- Leave yourself an "OUT" when you park
- Back in to a space when you arrive to avoid backing out

Use a spotter

- If there's a second driver, have them direct you
- Never hesitate to ask for help
- NEVER have the spotter stand behind your vehicle! They MUST stand to the side so that you can see them AT ALL TIMES in your mirror.

Back slowly

- Provides better vehicle control

Use your mirrors

- Use both left and right mirrors often during backing
- Don't depend entirely on mirrors, especially when estimating distances

Commercial Motor Vehicle Act of 1986

Commercial Driver's License

When the Commercial Motor Vehicle Safety Act of 1986 (CMVSA) became law, July 1, 1987, licensing standards for drivers of large vehicles was lax in many states. Few states required a truck driver to exhibit "behind-the-wheel" skills and many allowed a driver holding a license for the operation of an automobile to drive an 18-wheel tractor-trailer unit. Drivers could also obtain licenses from more than one state, so that traffic violations could be "spread" among the various licenses, thus preventing any one license from being revoked or permitting them to drive when a license had already been revoked in another state.

With the enactment of the CMVSA, operators of commercial motor vehicles (CMV) in interstate, foreign and intrastate commerce were required to have only one driver's license. A CMV is defined as a motor vehicle or combination of motor vehicles that:

- has a gross vehicle weight rating (GVWR) greater than 26,000 pounds; or
- has a gross combination weight rating (GCWR) greater than 26,000 pounds inclusive of a towed unit with a GVWR of more than 10,000 pounds; or
- is designed to transport 16 or more passengers (including the driver); or
- is used in the transportation of hazardous materials in a quantity requiring placarding under the Department of Transportation's hazardous materials regulations.

The CMVSA also required that regulations be issued establishing minimum standards for state testing and licensing of CMV operators and that all CMV operators possess a state issued Commercial Driver's License (CDL). Standards for the testing and licensing of CMV operators were issued by the Federal Highway Administration (FHWA) in 49 Code of Federal Regulations Part 383, Commercial Driver's License Standards; Requirements and Penalties.

Under the CDL program, a driver must hold a single license from the driver's state of domicile and the state issuing the license must maintain a single driver record. All states have enacted legislation necessary and, therefore, have begun testing drivers, as well as issuing CDLs.

To assure that a driver applying for a CDL was not already in possession of a license or had not had a license suspended or revoked, a nationwide clearinghouse called the Commercial Driver's License Information System (CDLIS) was established to provide states with a means of verifying the applicant's status. The CMVSA provided for CDL disqualification for certain criminal or traffic violations as well.

Company Operating Policy

Company policy should clearly state that all employees driving company vehicles be responsive to state motor vehicle laws. Within the parameters of these laws is the requirement that all drivers maintain the proper license to operate the class of vehicles they drive.

Requirements

It is the **drivers' responsibility** to:

- Possess only one valid drivers license
- Be properly licensed to drive commercial vehicles

- Notify the company of all moving violations, license suspension, or revocation upon conviction
- Be responsible for restitution of all moving violations
- Report all commercial driving jobs held during the past 10 years (commercial vehicle gross weight rating 26,000 lbs. or more)

It is the **employer's responsibility** to:

- Notify commercial drivers of vehicles with gross weight ratings of 26,000 lbs. or more of the Commercial Motor Vehicle Safety Act of 1986
- Maintain records of previous 10 years commercial driving experience
- Deny operation of commercial vehicles to employees known to be unlicensed or whose license is suspended or revoked

Note: Drivers or employers who violate these requirements are subject to civil penalties of up to \$2,500 or, under certain circumstances, criminal penalties of \$5,000 and/or 90 days imprisonment.

Accountability

In addition to penalties assessed by the state, employees found to be in violation of this policy should be subject to immediate termination. MVR's should be checked on a semi-annual basis.

The federal and state departments of transportation and can provide further information concerning how the Act affects your operation.

Driver Qualification Files

All drivers of commercial trucks must comply with part 391 of the Department of Transportation (DOT) regulations. Exceptions are drivers of light trucks (pick-ups, vans), and private passenger vehicles. An individual driver qualification file must be maintained and should include:

- Checklist of driver forms
- Application for employment
- Request for check of driving record
- Record of road test
- Certificate of road test
- Written examination
- Answers to written examination
- Driver physical examination
- Record of violations
- Driver data sheet
- Annual review of driving record
- Notice of disqualification
- Pocket cards

Note: DOT qualification files are available from suppliers such as J. J. Keller Inc. (See Section 7, Safety Resources).

Motor Vehicle Records (MVRs)

The use of MVRs is an effective and fair driver pre-placement mechanism when a specific point assignment policy is administered. A driver's past record provides one of the best indicators of their future performance as a safe, dependable driver. Operators with a history of vehicle accidents or traffic violations are likely to continue that pattern. Statistics show drivers with two or more accidents or convictions in a three year period are at least 2 1/2 times more likely to have an accident than a driver with a clear record.

Driver Selection Criteria

The Insurance Company recommends checking the driving records for all employees as part of your pre-employment screening process. Establish your own minimum requirements for driver acceptability.

If there are any questions on a driver's acceptability, or if there are mitigating circumstances on any of the citations or accidents, you may make a written request for recommendation to the Insurance Company through your local insurance agent.

Please be aware of the regulations on confidentiality in your state. In most areas, an employee or potential employee must consent to the record search. Following is a sample form that may be used. This form authorizes the mover, the local insurance agent, and the insurance company to view the individual's driving record.

Note: MVRs can be ordered through each state division of motor vehicles. Additionally, there are services available that provide MVRs, i.e., American Driving Records, Equifax and others (*Refer to Section 7, Safety Resources*).

Further Considerations

When reviewing MVRs assume accidents fall into the preventable category unless otherwise supported by specific facts or documentation. It is recommended this determination be made accurately and fairly. (*Refer to "Vehicle Accident Review"*)

Management should closely monitor drivers with points, or more than one accident or violation. Consider defensive driving training, limited merit increases, consideration as to territory handled, temporary placement in non-driving capacity (if feasible).

Consider appropriate recognition of drivers who have maintained a favorable record (recognition dinner, driver pins, gifts, etc.).

Driver Selection The Planned Interview

Major Areas Of Inquiry	Responses or Comments
Driver License	
<i>How did applicant get started driving?</i>	
<i>Have applicant describe likes and dislikes of driving.</i>	
Driving Experience	
<i>Type of equipment.</i>	
<i>Inquire about equipment preferences.</i>	
<i>Determine territory in which applicant has operated and vehicles driven.</i>	
Accident Record	
<i>Have applicant describe all previous accidents; were they preventable? What can be done to prevent similar accidents?</i>	
<i>Have applicant discuss safe driver awards held and what they mean to him/her.</i>	
<i>How has the applicant participated in loss prevention efforts in the past?</i>	
<i>How will or can applicant support the company safety efforts?</i>	
Traffic Convictions	
<i>The applicant should describe his/her operating record; were the convictions during work? What were the circumstances involved?</i>	
<i>Discuss, if necessary, license revocations or suspensions.</i>	
Employment	
<i>Why is the applicant seeking employment?</i>	
<i>Have applicant discuss any frequent changes in employment.</i>	
Education	
<i>Determine if aptitude and skill are appropriate for job available.</i>	
Physical History	
<i>Discuss with the applicant physical qualifications of the job and any physical limitations listed.</i>	
<i>Review with the applicant any job related accidents, which could impact ability to perform in position.</i>	
Other	

Vehicle Accident Review

A preventable accident is any occurrence involving a company vehicle or a vehicle operated on company business, which results in property damage and/or personal injury when the driver did not exercise reasonable care in preventing the accident. Accidents involve so many different factors that it is impossible to set hard and fast rules to classify them as preventable or non-preventable. The review committee must make this determination based on facts provided by a thorough accident investigation. If there is not enough information to make a decision, the driver's immediate supervisor should be required to provide additional information so an accurate determination can be made.

In making decisions concerning the prevention of accidents, the safety committee will answer the question: "What standard of safe driving performance do we expect of our drivers?" Drivers respect a strict interpretation of rules so long as the company takes the time and effort to ensure that these interpretations are made consistently and impartially.

Accident Review Committee Procedures

First Accident - No prior preventable accidents in a twenty-four month period.

- Review all facts and circumstances surrounding the accident and determine if it was preventable. The decision must be based on facts provided by a thorough accident investigation by the driver's supervisor. The driver should be notified in writing of the committee's decision.
- If the driver involved does not agree with the committee's determination, they may appear before the committee and present any additional information that bears on the accident. The committee will again review the facts, investigate further as necessary and make a second determination as to whether or not the accident was preventable. The driver will be notified of the determination and this second determination will be final.

Second Accident - Previous preventable accident in a twenty-four month period.

- Review all facts and circumstances surrounding the accident and determine if the accident was preventable. The driver will be notified in writing of the committee's decision.
- If the accident was preventable, the employee is notified that they have had two (2) preventable accidents in a twenty-four month period and that a third preventable accident within that period will result in termination of employment. The driver may disagree with the committee's decision and appeal in the same manner as stated under "Initial Accident."
- The general manager should receive a copy of this notification and will at this point, discuss the driver's record, driving habits and take all necessary constructive action to ensure future safe driving. This is in addition to and not to replace the immediate supervisor's investigation and action plan.

Third Accident - Preceded by two preventable accidents in a twenty-four month period.

- Review all facts and circumstances surrounding the accident and determine if the accident was preventable. The driver will be notified in writing of the committee's decision.
- If the accident was preventable, the employee will be notified that this is the third preventable accident, that termination of employment is pending and that the general manager will act on the

termination recommendation.

- The driver may disagree with the committee's decision and appeal as previously stated.
- Request for termination of employment will be forwarded to the general manager within 24 hours of employee notification of the safety committee's determination unless there is an appeal.

A Guide to Determining the Preventability of Accidents

The following guidelines can be used to help the committee determine preventability; however, actions must be based on specific facts and the individual accident situation.

To assist in determining if an accident is preventable or non-preventable, the National Safety Council describes the following as preventable:

Intersections

It is the responsibility of professional drivers to approach, enter and cross intersections prepared to avoid accidents that may occur through the action of other drivers. Complex traffic movement, blind intersections, or failure of the "other driver" to conform to law or traffic control devices will not automatically discharge an accident as "not preventable." Intersection accidents are preventable even though the professional driver has not violated traffic regulations. Their failure to take precautionary measures prior to entering the intersection is factors to be studied in making a decision. When a professional driver crosses an intersection and the obvious action of the "other driver" indicates possible involvement either by reason of excess speed, crossing their lane in turning or coming from behind a blind spot, the decision based on entrapment should be preventable.

Vehicle Ahead

Regardless of the abrupt or unexpected stopping of the vehicle ahead, drivers can prevent front-end collisions by maintaining a safe following distance at all times. This includes being prepared for possible obstructions on the highway, whether in plain view or hidden by the crest of a hill or the curve of a roadway. Overdriving headlights at night is a common cause of front-end collisions. Night speed should not be greater than that which will permit the vehicle to come to a stop within the forward distance illuminated by the vehicle's headlights.

Vehicle Behind

Investigation often discloses that drivers risk being struck from behind by failing to maintain a margin of safety in their own following distance. Rear-end collisions preceded by a roll-back, an abrupt stop at a grade crossing, when a traffic signal changes, or when a driver fails to signal a turn at an intersection, should be charged preventable. Failure to signal intentions or to slow down gradually should be considered preventable.

Passing

Failure to pass safely indicates faulty judgment and possible failure to consider one or more of the important factors a driver must observe before attempting to maneuver. Unusual actions, either of the driver being passed or of oncoming traffic, might appear to exonerate a driver involved in a passing accident; however, the entire passing maneuver is voluntary and is the driver's responsibility.

Being Passed

Sideswipes and cut-offs involving professional drivers while being passed are preventable when they fail to yield to the passing vehicle by slowing down or moving to the right where possible.

Oncoming

It is extremely important to check driver action when involved in a head-on or sideswipe accident with a vehicle approaching from the opposite direction. Exact location of vehicles, prior to and at the point of impact, must be carefully verified. Even though an opposing vehicle was in a passing maneuver, if the driver failed to slow down, stop, or move to the right to allow the vehicle to re-enter its own lane, the driver failed to take action to prevent the occurrence. Failing to signal the opposing driver by flicking the headlights or sounding the horn should also be taken into account.

Fixed Objects

Collisions with fixed objects are always preventable. They usually involve failure to check or properly judge clearances. New routes, strange delivery points, resurfaced pavements, under viaducts, inclined entrances to docks, marquees projecting over traveled section of road, and similar situations are not, in themselves, valid reasons for excusing a driver from being involved. Drivers must constantly be on the look-out for such conditions and make the necessary allowances.

Pedestrians

Traffic regulations and court decisions generally favor a pedestrian hit by a moving vehicle. An unusual route of a pedestrian at mid-block or from between parked vehicles does not necessarily relieve a driver from taking precautions to prevent such accidents. Even if speed limits are not posted or the area is not placarded with warning signs, speed too fast for conditions may be involved.

School zones, shopping areas, residential streets, and other areas with special pedestrian traffic must be traveled at reduced speeds equal to the particular situation. Bicycles, motor scooters and similar equipment are generally operated by young people and inexperienced operators. The driver who fails to reduce speed when this type of equipment is operated within sight-distance has failed to take the necessary precautions to prevent an accident. Keeping within posted speed limits is not necessarily taking the proper precaution when unusual conditions call for further voluntary reduction of speed.

Private Property

When a driver is expected to make deliveries at unusual locations, construction sites, etc., or on driveways not built to support heavy commercial vehicles, it is their responsibility to discuss the operation with the proper party and to obtain permission prior to entering the area.

Passenger Accidents

Passenger accidents in any vehicle are preventable when they are caused by faulty operation of the vehicle. Even though the incident did not involve a collision of the vehicle, it must be considered preventable when a driver stops, turns, or accelerates abruptly. Emergency action by a company driver to avoid a collision that results in passenger injury should be checked to determine whether proper driving prior to the emergency would have eliminated the need for the evasive maneuver.

Non-Collision

Many accidents, such as overturning, jack-knifing, or running off the road, may result from emergency action by a driver to preclude being involved in a collision. Examination of their driving procedure prior to the incident may reveal speed too fast for conditions, or other factors. The company driver's actions prior to involvement should be examined for possible errors or lack of defensive driving practice.

Miscellaneous

Projecting loads, loose objects falling from the vehicle, loose tarpaulins or chains, doors swinging open, etc., resulting in damage to the vehicle, cargo, or other property or injury to persons, are preventable when the driver's action or failure to secure them are evidenced. Cargo damage, resulting from unsafe vehicle operations, is preventable by drivers.

Parking

Unconventional parking locations, including double parking, failure to put out warning devices, etc., generally constitute evidence for judging an accident preventable. Roll-away accidents from a parked position normally should be classified preventable. This includes unauthorized entry into an unlocked unattended vehicle, failure to properly block wheels or to turn wheels toward the curb to prevent vehicle movement.

Backing

Practically all backing accidents are preventable. A driver is not relieved of their responsibility to back safely when a guide is involved in the maneuver. A guide cannot control the movement of the vehicle; therefore, a driver must check all clearances for himself.

Driver Training

The major purpose of driver training is to develop safe, skilled drivers. There are many benefits to both the employee and management from training. The well-trained employee is not only safe, but also is efficient, takes pride in the job, and requires less supervision.

While many companies appear to be similar in nature, a closer look reveals numerous differences in methods of operations and training needs.

The Trainer

Driver-trainers, full or part-time, are generally drivers with a good record of safety and service with the company. These drivers must also have the needed qualifications and capability to instruct and evaluate driving ability. Therefore, driver-trainer candidates should meet similar qualifications as met by supervisory personnel.

In order to do an effective job, the person chosen must be well versed in the company's driver-training policies. There are many good driver training courses available from the National Safety Council, International Training, Inc. and others. *A listing of some training programs available is Section 7, Safety Resources.*

Training Programs

All employees hired to drive company vehicles should complete a comprehensive driver training program within the first 90 days of employment. This program should also be completed by all current drivers within 9 months of establishing a safety program.

The driver training program may consist of 5 major segments as follows:

General Orientation

- Company History
- Job Duties
- Driver Training
- Employee Conduct
- Safety Program
- Company Benefits
- Forms, Manuals, Procedures

Vehicle Operation

- Vehicle Inspection
- Vehicle Parts
- Seat Belts
- Yard Testing
- Road Testing

Driving Skills

- National Safety Council - Straight Truck Course
- Coaching the Professional Truck Driver (route and transport)
- Coaching the Experienced Driver (light trucks and vans, cars)
- Vehicle inspections (route and transport)

These are recommended courses. These or equivalent courses should be used. (*Refer to Section 7, Safety Resources.*)

Job Performance

- Material handling
- Protecting the public
- Accident reporting

Continuing Training

The company should hold a minimum of once-a-month driver meetings with an emphasis on safe driving techniques. The driver trainer should ride with each driver on a semi-annual basis to evaluate driving skill and provide instruction. Results of this evaluation should be documented and maintained in the driver file. A driver's skill evaluation should be conducted with any driver involved in a preventable incident.

Vehicle Accident Reporting, Documentation and Investigation

Vehicle accident reporting and investigation should be an integral part of a drivers' training program with all drivers required to demonstrate an understanding of what to do in case of an accident.

A description of the *Accident Reporting Kit* available for insured commercial fleet customers is found on later in this manual. The kit contains forms and instructions for the drivers to document or gather information relative to vehicle accidents.

Accident and Incident Documentation

While not specifically required by regulations, an "**Accident Reporting Kit**" in the glove box of each vehicle is recommended.

Such a kit will to help document accident facts and remind drivers how to conduct themselves at the scene of an accident. Accurate accident reports in conjunction with photographic evidence also help minimize fraudulent third-party vehicle accident claims.

Each kit might contain an accident reporting form, witness information cards, exoneration card, and an accident notification card

Our studies have shown that photographs in conjunction with facts gathered at the scene can significantly affect overall accident costs by reducing fraudulent physical damage and bodily injury claims. It is recommended that a single-use disposable camera be provided for each vehicle and stored in the glove box with the accident reporting kit.

Photographs, along with a description of each, should be dated and signed by the photographer and be provided the claim adjuster. Well documented photographs will assist with accident investigation and hazard correction.

Additionally, if an OSHA or DOT compliance officer, during an audit, photographs anything on company vehicles or property, you should take the same photographs from the same vantage point. These photographs can be of great value in negotiating a proposed penalty. We also recommend each facility be equipped with a camera to document any visitor trip and fall incidents.

Vehicle Condition and Maintenance

Most operations use several different types of vehicles such as cars, vans, straight trucks, etc. Depending on make and model, each type will have its own special preventive maintenance needs. Managers should establish a specific maintenance program in accordance with the manufactures suggested schedule. A vehicle maintenance file should be established and properly maintained for each vehicle. Equipment used with a vehicle should be included in the preventive maintenance program.

Pre-trip Inspection of Vehicles

It is the responsibility of every driver of a company vehicle to be aware of and request work orders for any defects or malfunctions of the assigned vehicle and its equipment. It is the responsibility of the company to assess and correct, as necessary, these defects while also providing regular preventive maintenance of all company vehicles.

Automobiles and light trucks should be inspected weekly or more often if defects become apparent (i.e., noise, vibrations, soft brake, etc.). Vans, service trucks and straight trucks should be inspected daily. Large vehicles should be inspected daily or at change of drivers with both pre-trip and post-trip inspections performed. All trailers should also be inspected daily.

Safety Belts

The company should recognize that safety belts are an important and effective item of personal protective equipment. Use of seat belts can help prevent costly injuries and strengthen your competitiveness. Therefore, we suggest the following safety belt usage policy be implemented: ***Available Safety Belts Shall Be Used While Traveling On Company Business***

This policy should apply to all employees and to all occupants of vehicles driven by employees on company business. It is especially important that all managers and supervisors demonstrate their commitment to, and support of, the seat belt policy by their strict adherence to it.

Belt systems in all vehicles should be upgraded where necessary and maintained so that they are clean, easily accessible, and in good working order. Seat belt use should be enforced in the same manner and with the same policy as any other safety rule.

Accident Review--EMPLOYEE NOTIFICATION

Employee: _____ Date: _____

Division: _____ Accident Date: _____

Department: _____ Accident No.: _____

The review committee has reviewed the available facts regarding the accident in which you were involved on the above date.

It is the finding of the committee that you (did/did not) exercise reasonable precaution to prevent the accident and therefore it (was/was not) a preventable accident. If you believe there are different or additional facts from those originally provided that might affect this decision, you may appeal to the committee.

You are reminded that three preventable accidents in a twenty-four month period will result in termination of employment. Further, if this is your second preventable accident, a third accident on or before (Date)_____ will result in termination of employment.

If this is your third preventable accident within twenty-four months, you are hereby advised that the committee has recommended to management termination of your employment.

Review Committee Chairman

cc: General Manager
Supervisor
Driver file

Daily Driver's Vehicle Inspection Report

Check any defective item and provide details under "Remarks".

Truck # _____

Mileage _____ Date _____

	Air Compressor		Safety Equipment		Heater
	Air Lines		Horn		Fire Extinguisher
	Battery		Flags/Flares/Fuses		Lights
	Brakes		Head		Springs
	Brake Fluid		Tail		Starter
	Clutch		Turn-Stop		Tires
	Defroster		Mirrors		Muffler
	Drive Line		Transmission		Wheels
	Windows		Oil Pressure		Engine
	Engine Oil Level		Windshield		Radiator
	Front Axle		Rear End		Wipers
	Fuel Tank		Other		

Remarks:

- ☐ Condition of the above is satisfactory
- ☐ Above defects need not be corrected for safe operation

Driver Signature _____

☐ Above defects corrected by _____

Date _____

***SAFETY IS EVERY EMPLOYEE'S RESPONSIBILITY.
BE RESPONSIBLE!***

Sample Safety Policy Statement

Basically, the safety policy should state management's concern with safe operations, including vehicular safety, and should serve as a guide for safe conduct by management and employees. The policy statement should be signed by the owner/president of the company and be well publicized throughout the organization. All personnel must be held accountable for deviations in safe practices. As management sets the example for the employees, it is imperative that they adhere to the safety policy at all times.

Management Safety Policy

The efficiency of any operation can be measured directly by its ability to control losses. Accidents resulting in personal injury and damage to property and equipment represent needless suffering and waste. Company policy regarding safety is:

- The safety of the employee, the public, and the operation is paramount, and every attempt must be made to reduce the possibility of accidents.
- Safety shall take precedence over expediency, or short cuts, at all times.
- Our company intends to comply with all applicable safety laws and regulations.

It is the responsibility of every employee to maintain the safest conditions and equipment at all times. Each employee will be expected to demonstrate an attitude that reflects this policy and promotes safe work habits.

Section 2

Cargo Security and Warehouse Loss Prevention

	<i>Page</i>
<i>Introduction</i>	<i>33</i>
<i>Cargo Loss and Damage</i>	<i>33</i>
<i>Management Practices</i>	<i>34</i>
<i>Fire Prevention</i>	<i>35</i>
<i>Over the Road Security</i>	<i>36</i>
<i>Driver Practices</i>	<i>37</i>

Cargo Security and Warehouse Loss Prevention

Introduction

Cargo protection requires thorough planning to be effective and remain effective through changing conditions. Cargo security is a function of physical security measures, procedural controls, management resolve, and the use of uniform security controls and procedures by all entities that handle a shipment along a route.

This section of the loss control guide describes the general causes of cargo losses and offers guidelines for minimizing the risk of such losses. Individual safety responsibilities for both, management and employees are included and considered necessary to minimize loss potential. Fire prevention guidelines for warehouse and terminal operations are also provided. More specific fire protection information is available in Section 3.

Although, specific duties and responsibilities are outlined, your organization may differ and may combine the duties of some individuals. Whatever the case, it is suggested that this information be used to develop your own customized procedures.

Cargo Loss and Damage

There are typically seven major causes of cargo losses and damage in the moving and storage industry. There is very little cargo of any nature that is not susceptible to one or all of these types of situations. However, steps can be taken to ensure maximum transport and storage security.

- **Shortage** – A definite record should be maintained that identifies the vehicle on which goods are placed, who loaded it, driver involved, who unloaded it, dates, amount or number of pieces, etc. Many of these details can be found on the Bill of Lading. Warehouse lot control systems must also work in the same manner. Information can be found on the warehouse receipt. With these details a mover can better cope with shortage problems and apply corrective measures.
- **Theft and pilferage** – Adequate vehicle security measures should be in force at the loading dock, office, and warehouse. Use of seals, locks or burglar alarm devices on vehicles is helpful. Unattended vehicles with body doors open or with keys in the ignition are invitations to theft. Also, consider the use of kingpin locks if loaded trailers are removed. In the warehouse, admittance control, motion detectors and surveillance cameras are good deterrents.
- **Improper handling, loading, unloading or stowing** – All cargo must be adequately secured, covered, padded, blocked, chocked and shielded to prevent shifting and bumping during transit and storage. Moving equipment should be used properly (dollies, hand trucks, pallet jacks, etc.) and assistance requested when needed.

Cargo that is large, heavy or has other unusual handling characteristics should be given special consideration. Personnel involved in moving such equipment should be informed of its location in the load or warehouse, its characteristics, and special handling requirements.

- **Concealed damage** – Light or fragile cargo should be loaded so as to minimize damage and movement within the vehicle both during transport and storage. Care should be taken to comply with any special warnings or instructions such as labels reading “This Side Up” or the like. Any goods or containers showing obvious signs of damage, especially those packed by the customer

should be documented and the conditions acknowledged in writing by the customer.

- **Delay** – Cargo can be subject to loss through delay of delivery at the agreed time. Vehicle accidents and poor vehicle maintenance can contribute to this type of loss (*Refer to Section 1, Fleet Safety*).
- **Defective equipment** – Equipment should be suitable for moving the specific cargo. Vehicles and warehouses not designed for transportation and storage of goods can lead to additional security issues and damage. Defective equipment can also result in potential losses. This is especially true for cargo requiring the use of a forklift truck. A regular preventive maintenance program for vehicles and auxiliary equipment (i.e., carts, ramps, lifts, and temperature controls for storage of electronic media/similar record storage) should be implemented.
- **Vehicle accident or fire** – Drivers with a thorough knowledge of safe driving practices can do much to reduce vehicle accidents. Protection from fire can be greatly increased by avoiding smoking inside warehouses, truck bodies or trailers, good maintenance of equipment, vigilance against tire fires and adequate protection of heating equipment.

Management Practices

Individuals responsible for cargo management and safety must enforce security, training and maintenance procedures. The responsibilities outlined below are general guidelines for developing customized procedures.

Security

- Designate an individual responsible for the overall security program
- Establish written security procedures for all personnel
- Incorporate the security program into employee orientation and training/education
- Establish procedures for personnel identification and control
- Train personnel in proper documentation and security of shipping documents
- Maintain strict accountability of cargo at all stages of handling, including overages, shortages, and damaged items
- Establish written special security procedures for high-value cargo on a need-to-know basis
- Allow for continuous monitoring/feedback and adjustment of the security program.

Training

- Designate an individual responsible for a formal training program
- Establish written instructions for operation/maintenance of equipment, cargo handling, proper documentation and flow of shipping documents
- Establish a formal ongoing employee and driver training program that includes general procedures, paperwork, and communications
- Maintain and monitor drivers and cargo handlers records to identify instructional training needs
- Evaluate personnel performances periodically

Vehicle Equipment Maintenance

- Designate an individual responsible for a maintenance program
- Establish requirements for qualifications and training of individuals responsible for maintenance
- Maintain a current inventory of all equipment to ensure proper maintenance
- Establish preventive maintenance requirements and procedures for all equipment, referring to manufacture's operating and maintenance manuals
- Inspect equipment regularly and maintain records to monitor compliance with procedures
- Ensure drivers complete daily pre-trip and post-trip inspections and provide feedback to maintenance personnel

Fire Prevention

Fire prevention is an important but frequently over looked consideration in the moving and storage industry. While theft and pilferage may represent more recognized loss exposures, a fire has the potential to totally and permanently disrupt operations. Responsible management, suitable terminal/warehouse construction, adequate fire protection and proper storage arrangements are critical factors in any program to reduce or eliminate losses (Refer to Section 3, Property Loss Control for additional information):

General

A fire protection program should be developed to prevent or reduce losses. The program should include the following:

- At a minimum personnel trained to use portable fire extinguishers
- For facilities with automatic sprinkler systems, minimum quarterly service contract with outside vendor
- Pre-emergency planning incorporating fire department familiarization, salvage operations and alternative storage sites
- Adequate and regularly scheduled facility maintenance (daily, monthly, quarterly, annually)
- Control of housekeeping, welding/cutting, and smoking (no smoking policy, no smoking signs, and designated smoking area)

Construction

- Warehouse/Terminal should be of fire resistive or non-combustible construction
- Fire walls or fire partitions should be used as much as possible to limit the amount of contents or inventory subject to a single fire occurrence

Occupancy

- Identify and segregate materials according to standard hazard classifications if applicable
- Storage arrangements (rack setups, stack height and aisle widths) should conform to applicable standards
- Goods subject to water damage should be raised off the floor (skidded)
- Adequate access should be provided to and from all storage areas

Protection

The following fire protection features should be provided to minimize loss:

- Adequate access to all areas for fire fighting
- Adequate water supplies and hydrants
- Standpipe systems, hand hose lines and portable extinguishers
- Central station supervised automatic detection and alarm systems
- Automatic sprinkler systems to protect combustible construction and/or storage
- Recorded watchman service for unattended or high-valued contents

Yard Storage

- All areas should be provided with adequate lighting, fencing, and watchman service and/or camera supervision
- Yard storage should be adequately separated from all buildings to prevent fire spread

Non-Terminal Operations

- Written vehicle maintenance programs should be instituted and strictly followed to prevent fuel systems, brake lining and tire fires
- Suitable fire extinguishers should be provided in vehicle cabs to control small fires
- Driver training programs should include handling of basic over-the-road fire hazards
- An accurate manifest or bill of lading should be in the driver's possession to aid local firefighting operation

Over the Road Security

Cargo in transit is susceptible to increased risk and can only be controlled by diligent safety practices and procedures. The following categories and related lists should be reviewed where applicable.

General Security

- Do not pick up hitchhikers
- Remove keys from ignition when leaving vehicle. Roll up windows, lock all doors and compartments
- Park in area where load is visible
- Do not leave load at delivery site without obtaining a signed receipt
- Use main highways whenever possible
- If vehicles have alarms – test before leaving terminals
- Copy of daily route schedule should be kept on file with dispatcher

Terminal or Warehouse

- Establish a security program and designated security manager
- Install central station monitored alarm system, or provide watchman services reporting to central station

- Segregate high value property from general merchandise in a confined area restricted to personnel cleared to handle such property.
- Use king pin locks for parked cargo trailers
- Park trucks and trailers with compartment doors flush against building walls
- Keep keys in secure area and limit use to designated employees
- Keep outside terminal area well lighted and fenced with one entrance to control access
- Employees should be advised to challenge strangers that enter the loading dock
- Drivers should be restricted to designated dock areas
- Employee and visitor parking areas should be located outside the cargo handling area
- Limit number of employees that have access to shipping and receiving information
- Conduct frequent dock check by matching freight with its paperwork

High Valued Properties

- Provide reliable truck alarm systems
- Restrict information concerning the movement of high valued freight to a need to know basis
- If possible, periodically rotate drivers among runs. Never use new or part time help “ALONE” on major loads
- Establish a communications system for terminal(s) or warehouse(s) - use radio telephones or other electronic methods to transmit periodically from various checkpoints en route
- Maintain a log of all shipments at the terminal/warehouse with times of transmissions duly recorded for all high valued shipments.
- Identify by bright, fluorescent type markings, the tops of all trucks and trailers for the best aerial observance in event of a hi-jacking
- On long hauls, and consistent with the type of merchandise and value, other protected means of transportation should be utilized (i.e., satellite tracking systems). Otherwise, at least two (2) men should be with the load so that no less than one will be in attendance at all times. Sleeper cabs should be used and stopovers at motels or similar places should not be permitted

Locations Under the Control of Others

- Select a reputable and financially responsible public warehouse, in good physical condition with adequate physical protection and controls for commodity being stored.
- Immediately upon arrival, log in with dispatcher, obtaining a written acknowledgment for the receipt of the load.

Stops Along the Way

- Avoid parking in areas subject to flooding, earthslides, or collision from other vehicles.
- Insure that alarms are in “ON” position.

Driver Practices

Driver practices are “key” to the protection of cargo. Drivers must be thoroughly qualified to drive and move specific cargo. Drivers must also be responsible for proper documentation and safe procedures relative to cargo handling.

General

- Follow company rules and policies regarding documentation, safe driving, call-in procedures, equipment breakdowns and vehicle accidents
- Do not smoke in cargo compartment at anytime
- Close and lock cargo compartment unless cargo is being loaded or unloaded
- Remove keys from power unit and lock cab when driver is absent
- Adhere to rules and regulations for hazardous materials

Pickup and Delivery

- Sign for exact cargo received and get signed bill on delivery
- Accept only freight properly packaged, crated or protected
- Handle cargo loading, and unloading to avoid damage (block, brace, tier), or oversee the process
- Do not leave vehicle during loading/unloading by other
- Be aware of temperature restrictions
- Assure proper hookup of trailers

Section 3

Property Loss Control

	<i>Page</i>
<i>Introduction</i>	<i>40</i>
<i>Contingency Planning & Emergency Organization</i>	<i>40</i>
<i>General Fire Hazards</i>	<i>42</i>
<i>Welding and Cutting</i>	<i>45</i>
<i>Table 1 Inspection of Fire Protection Systems</i>	<i>47</i>

Property Loss Control

Introduction

Property loss control is an organized and managed effort directed towards loss prevention and preservation of profit producing human and physical assets. Loss control will reduce the possibility of insured and uninsured losses. Good loss control is based on education and training of everyone involved.

The complexity of property loss control varies depending on facility location, size, operations and the extent of fire protection available. However, all property loss control should consist of the following elements:

- A contingency plan
- Emergency organization
- Fire protection equipment inspection procedures
- Cutting and welding procedures (if applicable)

Management should be aware of the fire hazards relative to their operations and implement control measures to minimize the possibility of a fire occurring. Routine self-inspections designed to identify such hazards should be developed (*Refer to Section 5, Special Topics for a sample property self-inspection form*).

Contingency Planning

Contingency planning can provide valuable information about a facility that will improve the ability of the fire department to effectively respond to a fire. A pre-fire planning session should be arranged with the local fire department. Such planning increases the potential of saving lives and may reduce property damage.

A pre-fire planning session provides the fire department and management an opportunity to exchange critical information and coordinate necessary actions in the event of a fire. Planning will vary depending on the size of each facility, but basically the same general information is needed. This information includes building layout; contents; construction details; and type and location of fire protection systems.

Emergency Organization

It is critical to have designated staff familiar with key emergency procedures. Proper action taken within the first few minutes of an emergency can make the difference between a minor incident and a disaster. These employees will be designated to deal with emergencies such as fire, earthquake, winter storm, tornado or hurricane and flooding. These responsibilities can include contacting local emergency assistance (police, fire department, ambulance, etc.) and communicating with employees and management. Larger and more complex facilities should consider organizing an emergency team to coordinate assistance.

Fire Protection Equipment

If automatic sprinklers are provided the systems should be inspected, tested and maintained in accordance with National Fire Protection Association Standard 25 (NFPA 25), Inspection, Testing, and Maintenance

of Water-Based Fire Protection Systems. No matter how reliable the equipment, periodic maintenance is needed to ensure a fire protection system will operate as designed. Fire protection systems are not an integral part of facility operations and are often taken for granted. Routine inspections and scheduled maintenance are needed to prevent shut sprinkler control valves, plugged sprinkler piping and inoperative fire pumps that can result in millions of dollars in property losses, loss of business and jobs, and loss of life.

Inspection

The responsibility for supervision of fire protection systems rests with management and designated personnel responsible for the equipment. Employees responsible for system supervision should be familiar with fire protection equipment and know what sprinkler valves to operate during an emergency. For locations having several sprinkler systems it is important that an up to date sketch be maintained showing the location of sprinkler control valves. Proper records should be maintained of inspections. Alternate inspection personnel should be available to make fire prevention inspections when the designated individual is ill or on vacation. Company management should support prompt repair of equipment when deficiencies are noted.

Sprinkler system inspection and maintenance should be performed by a contractor where a trained maintenance staff is not available. Generally, the contractor will furnish a written report and if requested by the customer, forward copies of the report to the insurance carrier. Frequency of inspections will vary but the sprinkler industry normally advises a minimum of four inspections per year. A contract with a sprinkler contractor does not relieve management of responsibilities for proper maintenance of equipment; reduce the frequency of recommended inspections; or change the need for locking valves. NFPA 25 discusses loss prevention inspections and establishing a formal inspection, testing and maintenance program (*Refer to Table 1*).

Inspection Form

Since the number, type and complexity of fire protection systems will vary depending on the size of sprinklered facilities, a tailor made inspection form is needed. Such a form not only serves as a guide for conducting inspections but also provides a method of proper record keeping. The inspector should carry the form and use it as a checklist. It should be filled in as rounds are made, not after the completion of an inspection.

The following sections can be used to help in developing a customized checklist for your locations.

Frequency of Inspection

The frequency of inspection of fire protection equipment depends on numerous factors. For example, dry pipe systems should be checked daily in the winter; but less frequent checks would be acceptable in the summer. Table 1 lists the recommended frequency for testing and maintenance of various sprinkler system components.

As indicated in Table 1, the frequency of checking sprinkler control valves will vary from weekly for sealed valves to monthly for locked valves. If there is an established inspection program and the frequency of checking locked valves is weekly this practice should not be discouraged. The frequency of inspections listed is considered minimum.

Marking and Identification of Equipment

Sprinkler control valves should be numbered for inspection and identification purposes. The numbers should correspond with the number on the inspection form. A placard should be attached to automatic sprinkler risers indicating the number of the sprinkler valve controlling the riser (if controlled by outside valves).

Valves should be plainly marked with the direction to open. If not marked by the manufacturer, a sign should be posted near the valve indicating direction to open.

Handling Impairments of Automatic Sprinkler Systems

Impairment to an automatic sprinkler system is a situation in which the system is made inoperative, either in whole or part. The impairment may be necessary to conduct scheduled maintenance of equipment or to make emergency repairs. Impairment may also be due to new construction or failure of the water supply.

Regardless of the reason, impairment results in the sprinkler system being temporarily out of service. Such a condition may result in a severe property loss in the event of a fire. Locations protected by automatic sprinkler systems should have an impairment handling process to control situations when sprinkler systems are inoperative.

Locking

All fire protection system control valves larger than 1 1/2 inch or those controlling more than five sprinklers should be locked open. This includes electrically supervised valves. Locks and chains as securing devices should be sturdy and resistant to breakage except by heavy bolt cutters. Breakaway and combination locks should not be used. Distribution of keys should be kept to a minimum and keys should be restricted to only those directly responsible for the system.

General Fire Hazards

Housekeeping

Good housekeeping should be an on-going practice. Covered metal containers should be provided for trash. Containers should be emptied at the end of each day or more frequently if necessary. Special attention should be given to the removal of grease, paint residue and oil deposits from floors.

Portable Fire Extinguishers

Portable fire extinguishers should be provided throughout the building. Extinguishers should be selected on the basis of their effectiveness for a specific hazard. They should be mounted in readily accessible locations. Travel distance to an extinguisher should be a maximum of 75 feet.

General Office

- Matches or cigarettes should not be thrown into wastebaskets
- Cleaning and maintenance people should not place cigarette butts from ashtrays into cardboard boxes or cloth bags
- Electrical outlets should be three wire grounded. The use of extension cords should be kept to a minimum

- Portable fire extinguishers should be provided within 75 ft. of any point and readily accessible

Heating, Ventilation, and Air Conditioning Systems (HVAC)

HVAC systems should be routinely serviced both before and during each season.

Smoking

Smoking anywhere in a building is a potential hazard. Designated smoking areas should be clearly marked. Ashtrays, sand buckets, or similar means for extinguishing cigarettes should be available where smoking is permitted.

Electronic Data Processing Equipment

- If there is a computer room, it should be located in an area with minimum fire exposure. In large installations, equipment should be installed on raised floors with decking panels composed of non-combustible material. A basement location is not preferred, but if unavoidable, it should be watertight and have adequate drainage.
- Computer room air conditioning systems should be separate from the rest of the building to lessen the risk of smoke damage. If this is not feasible, fire dampers should be installed in the ductwork.
- Combustible materials (paper, spare tape, disc packs, etc.) should be limited to daily requirements. Important records regularly kept in the computer room should be stored in a one-hour fire resistive safe or file cabinet to minimize damage in the event of fire.
- Vital records should be maintained on a constantly updated duplicate set system. The duplicate set should be kept in a separate area or at an off-site location.
- For high valued computer equipment a fixed total flooding gaseous extinguishing system should be provided as a first line of defense against fire. Automatic sprinkler protection should be provided as backup protection if ordinary combustibles are located in the room or the room construction is combustible.
- Portable carbon dioxide fire extinguishers or halon replacement agents should be provided to allow a manual means of fire fighting. The distance between extinguishers should not exceed 75 ft. with one 10 lb. extinguisher per 3000 sq. ft. of floor area.

Flammable and Combustible Liquids Storage

Any liquid with a flash point below 100F and vapor pressure not exceeding 40 lbs. per sq. in. is considered flammable. Combustible liquids have a flash point above 100F.

Inside Storage Rooms

An inside storage room less than 150 sq. ft. should be of 1 hour fire rated construction with 3/4 hour rated fire doors. Rooms greater than 150 sq. ft. but less than 500 sq. ft. should be of 2 hour fire rated construction with 1 hour rated fire doors.

Metal Cabinet

No more than 120 gallons of flammable and combustible liquids should be stored in a single storage cabinet. Of this total, there should be no more than 60 gallons of liquids with a flash point less than 140F.

Cabinets should be of metal construction and be Underwriters Laboratory (UL) listed or Factory Mutual (FM) approved.

Fire Doors

Well-maintained fire doors help prevent the spread of fire, heat, and smoke between sections of a building. Where fire doors have been installed, the following points should be checked:

- Are fire door openings obstructed?
- Are materials piled against the door?
- Are fire doors wedged or tied open?
- Are fusible links clean and free of paint?
- Are automatic attachments in good condition?
- Are doors in good physical condition?
- Are guides and pulleys well lubricated?
- Are doors tested frequently to ensure they operate properly?

Idle Pallets

Pallets should preferably be stored outside. When stored indoors the height of pallet storage should be no higher than 8 feet. Each pile of more than four stacks shall be separated from other pallet piles by 8 feet of clear space and 25 feet from the nearest commodity.

When stored outdoors separations between piles and the building should be as follows:

Pile Size Minimum	Distance
Under 50 pallets	20 ft.
50 to 200 pallets	30 ft.
Over 200 pallets	50 ft.

Forklift Trucks

Liquid propane (LP) gas forklifts are used at many locations for material handling. The greatest potential fire source for LP gas forklift trucks are fuel leaks ignited by engine heat, the ignition system or other electrical equipment. Fuel leaks occur due to improper refueling practices or defective cylinders. The following procedures should be followed to minimize potential fire hazards:

- Only trained and designated personnel should refuel or exchange LP gas cylinders
- Preferably cylinders should be exchanged or refueled outside
- Engines should be stopped and the operator off the truck during refueling
- The gas cylinders should not be over filled, this can lead to a release of gas through the relief valve
- A soap solution can be used to check for possible leaks
- Smoking should be prohibited
- LP gas cylinders should not be thrown, dropped, rolled or dragged
- Reserve containers should be transported with service valves closed

- Forklifts should not be stored near sources of heat

If containers must be refueled or exchanged indoors the following precautions should be taken to minimize the escape of fuel:

- Close the valve on the LP gas container and use an approved automatic quick closing coupling in the fuel line (a type that closes in both directions when uncoupled)
- When a quick coupling device is not used, the fuel line should be emptied by allowing the engine to run until the fuel in the line is consumed

Forklift Battery Charging

Electric forklifts are also used at many locations. During charging, electric forklift batteries give off hydrogen gas. In certain concentrations gases can be explosive. Therefore, battery charging operations should be conducted in a designated area having adequate ventilation.

Welding and Cutting Procedures

Welding and cutting account for a majority of fires at commercial and industrial properties each year. Precautions to prevent these types of fires are well known. Although, the extent of welding and cutting conducted at a given location may be considered incidental, the following should be considered:

- Secure authorization from management prior to any welding or cutting work
- Use only approved equipment such as torches, manifolds, regulators or pressure reducing valves
- Determine if combustible materials or hazardous areas are present or likely to be present in the work area
- Protect combustibles from ignition by moving the work to a location free of combustibles
- If work can not be moved, move combustibles a safe distance from the work (35 ft. horizontally), or use a fire retardant material to shield combustibles from ignition

A fire watch should be required whenever cutting or welding is performed in locations where other than a minor fire might develop, or any of the following conditions exist:

- When there is combustible materials in building construction or contents closer than 35 ft. from the point of operation
- When combustibles are more than 35 ft. away but are easily ignited by spark
- When wall or floor openings within a 35 ft. radius expose combustible materials in adjacent areas, including concealed spaces in walls or floors
- When combustible materials are adjacent to the side of metal partitions, walls, ceiling or roofs and are likely to be ignited by conduction or radiation

A fire watch should:

- Have fire extinguishing equipment readily available and be trained in its use
- Be familiar with the facility and procedures for sounding the alarm
- Watch for fires in all exposed areas

- Only try to extinguish fires which can be fought with the equipment available, otherwise sound the alarm immediately
- Outside or independent contractors involved in cutting or welding on your premises should be required to follow the same procedures. Such procedures should be included in the bid specifications and work contracts.

Gas Cylinder Storage

Compressed gas cylinders should be stored in areas where they are not subject to impact by forklifts, pallet jack, etc. Empty cylinders should be clearly identified and kept separate from other cylinders. Cylinders should be stored in an upright position, with protective cap in place and be chained to prevent accidental falling. Cylinders that are damaged or have defective gauges should be returned to the supplier.

Table 1

***Fire Protection Systems
Minimum Inspection, Testing and Maintenance Frequency***

Components	Activity	Frequency
Control Valves - Sealed - Locked - Tamper Switch	Inspection Inspection Inspection	Weekly Monthly Monthly
Alarm Valves - Exterior - Interior - Strainers, Filters, orifices	Inspection Inspection Inspection	Monthly 5 years 5 years
Check Valve - Interior	Inspection	5 years
Preaction/Deluge Valve - Enclosure (during cold weather) - Exterior - Interior - Strainer, Filters, Orifices	Inspection Inspection Inspection Inspection	Daily/Weekly Weekly Yearly/5 years 5 years
Dry Pipe Valves/Quick Opening Devices - Enclosure (during cold weather) - Exterior - Interior - Strainer, Filters, Orifices	Inspection Inspection Inspection Inspection	Daily/Weekly Weekly Annually 5 years
Pressure Regulating & Relief Valves - Sprinkler Systems - Hose connections - Hose Racks - Fire Pumps - Casing Relief Valves - Pressure relief Valves	Inspection Inspection Inspection Inspection Inspection Inspection	Monthly Monthly Monthly Weekly Weekly Weekly

Table 1
(Continued)

Components	Activity	Frequency
Backflow Prevention Assemblies		
- Reduced pressure	Inspection	Weekly
- Reduced pressure detector	Inspection	Weekly
Fire Department Connection	Inspection	Monthly
Main Drain	Test	Quarterly
Waterflow Alarm	Test	Quarterly
Control Valve		
- Position	Test	Quarterly
- Operation	Test	Annually
Preaction/Deluge Valve		
- Priming Water	Test	Quarterly
- Low Pressure Alarm	Test	Quarterly
- Full Flow	Test	Annually
Dry Pipe Valves/Quick Opening Device		
- Priming water	Test	Quarterly
- Low air pressure alarm	Test	Quarterly
- Quick opening devices	Test	Semi-annually
- Trip test	Test	Yearly
- Full flow trip test	Test	3 years
Pressure Regulating & Relief Valves		
- Sprinkler system	Test	Annually
- Circulation relief	Test	Yearly
- Pressure relief valve	Test	Yearly
- Hose Connection	Test	5 years
- Hose rack	Test	5 years
Backflow Prevention Assemblies	Test	Yearly
Control Valve	Maintenance	Yearly
Preaction/Deluge Valve	Maintenance	Yearly
Dry Pipe Valve/Quick Opening Device	Maintenance	Yearly

Section 4

General Liability Loss Control

	<i>Page</i>
<i>Premises Liability Loss Control</i>	<i>50</i>
<i>Other Liability</i>	<i>50</i>
<i>Outside Contractors</i>	<i>52</i>

General Liability Loss Control

Premises Liability Loss Control

Premises liability safety includes most of the elements of a typical employee safety program. However, due to added exposures with respect to the public and vendors frequenting the facility, an emphasis of loss control is needed in these related areas. One special consideration is life safety for all building occupants. Loss control activities should include the following:

- Periodic inspection of exits and exit paths (aisles, corridors, stairs and fire escapes)
- Periodic inspection and testing of emergency lighting, smoke and heat detection systems, and fire alarm systems
- Posted evacuation signs indicating the nearest exit and exit path
- Periodic evacuation drills
- Arrangements for emergency medical treatment
- Designated "Smoking Areas" and "No Smoking Areas"
- Special storage precautions for flammables and other hazardous materials
- Inspection and testing of sprinkler equipment

Other Liability

Further exposures can occur from sidewalks and parking lots if they are not inspected and repaired on a regular basis, some examples include:

- Uneven surfaces
- Protrusions
- Indentations
- Holes
- Debris and other tripping hazards

Other areas include poorly maintained elevators, lift gates and ramps that can contribute to serious injury. Also, review the exposure from attachments to buildings (such as, signs or awnings) and other items such as boilers and pressure vessels.

It is important that potential liability exposures routinely be inspected and problems found corrected. Formal inspections should be scheduled and documented using checklists and testing procedures if applicable. Inspections should provide sufficient input toward the upkeep of the premises and be conducted often enough to assure a safe environment. Note that inspections conducted by a legal authority are typically directed towards meeting the requirements of law and do not always provide guidance for the protection of the general public (*Refer to Section 5, Special Topics for a sample premises liability self-inspection checklist*).

Liability Checklist

The following items should be addressed in the company safety program:

- Driveways, parking lots and walkways should be well-surfaced and properly maintained.
- Parking lots should be conveniently located as near to the main or employee entrances. Regular maintenance should include repairing cracks and holes; painting curbs, ramps and auto wheel stops; and maintaining adequate illumination.
- Guidelines for snow and ice removal should be established in advance.
- Building entrances should be well lit, have non-skid floor coverings where applicable (wall-to-wall carpeting, smooth absorbent floor mats).
- All designated emergency exits should have proper, illuminated signs near them. All passageways designated as emergency exits must be kept clear and easily accessible at all times.
- All exits must remain unlocked at all times when people are in the building. If an emergency exit must be kept locked for security reasons, that exit should be provided with "panic hardware" - a device that will unlock the door if pushed in an emergency.
- Emergency lighting should be installed to aid in- evacuation in case of power outage or fire. As a minimum, one emergency lighting unit should illuminate each emergency exit, enclosed stairwell, hallway and other areas leading to exits.
- Develop an evacuation plan and distribute it to all employees. Post simple one line maps of each area showing the primary and secondary routes out of the building and list current phone numbers of persons to be notified in an emergency. Most important, hold practice drills at least semi-annually to identify flaws in your plan.
- Provide suitable access and facilities for disabled and handicapped persons where appropriate.

If An Accident Happens

Post-occurrence activities concern themselves with investigating review and analysis of accident records. Post-occurrence activities should include:

- The immediate or timely investigation of accidents, public claims and complaints
- Use of a camera to document conditions where an accident occurs, taking photographs at the time of an incident
- Consideration of maintaining single-use cameras on site and in vehicles to document customer or third party bodily injury incidents
- A review of the details surrounding an accident and the steps taken to correct unsafe conditions
- The use of information gained from accident reviewed to improve activities and procedures related to public safety

Employees should be trained to conduct thorough accident investigations. They probably will have only one chance to obtain all the facts. An injured customer or member of the public is unlikely to return to the location to furnish additional details or to discuss it by phone.

Security

Storage facilities can be targeted for vandalism or theft. In order to limit losses to property, trucks and equipment you must start with an evaluation of the property's perimeter protection.

A fence around outside storage areas and grounds can:

- Keep trespassers, children and others from being injured on your property.
- Enhance the security of your property and equipment (a galvanized woven wire fence topped with three strands of barbed wire and lockable gates is preferable).

Pedestrian, motor vehicle and railroad entrances should have appropriate gates and good visibility in all directions

Outside Contractors

Hiring outside contractors has become commonplace in most industry groups. Contractors may provide a variety of services including custodial, landscaping, cutting, welding, plumbing, electrical work, or other maintenance. Their services provide businesses a way to have specialized work completed without the expense of hiring full-time employees or enduring the expense of buying and maintaining equipment needed to complete the job.

The prudent facility manager will take steps early in contract negotiations to protect company interests because using outside contractors can create substantial safety concerns for your operations. Lack of familiarity with the basic philosophy of accident prevention and, more specifically, your facility operations are the major factors that increase the possibility of losses resulting from their services. Inadequate supervision of the contractor's work activities increases the odds of an accident. Hot work (cutting and welding), turnkey maintenance, and construction work by their hazardous nature invite disaster.

Certificate of Insurance and Hold Harmless Agreement

Certificates of insurance should be requested before work begins. A consistent certificate program will help ensure claims are correctly transferred to the appropriate party. Also, contractors should be evaluated to determine their safety procedures and they should be made aware of your company's safety procedures. To prevent oversight, contractors should be provided written safety rules and procedures. These instructions should be attached to all bid specifications and included in all work contracts. Contracts should stipulate that all applicable safety standards and building codes would be complied with. Additionally, a favorable hold harmless agreement should be included in the contract. This agreement will reduce your company's liability and transfer liability to the appropriate party.

Safety procedures should be discussed with contractor's employees upon arrival at the facility. The extent of safety instruction will depend on your company's operations and associated exposures.

Items typically included in safety instructions are:

- Personal protective equipment requirements
- Lockout/tagout procedures
- Confined space entry procedures (i.e. boilers)
- Welding and cutting permit system

- Procedures for handling and working with hazardous chemicals
- Smoking regulations
- Housekeeping practices
- Fire protection equipment impairment handling procedures
- Fire notification procedures

Again, depending upon the scope of your company's operations and exposures, additional instructions may be needed. Clearly communicating safety procedures will help, but nothing will eliminate the possibility of an accident or financial loss resulting from the work of an outside contractor. However, securing certificates of insurance before work begins, including hold harmless agreements in work contracts and safety instructions in the bid specifications will help protect your interests and reduce the risk.

Section 5

Special Topics

	<i>Page</i>
<i>Cargo and Warehouse Tips</i>	<i>55</i>
<i>Forklift Safety</i>	<i>56</i>
<i>Self-Inspection Program</i>	<i>61</i>
<i>Sample checklists</i>	<i>65</i>

CARGO AND WAREHOUSE VALUATION TIPS

VALUATION

Your cargo & warehouse insurance policy can protect a shipper's or storage customer's goods at different valuation levels. The valuation options may have different names in different state or interstate tariffs. However, there are basically three options:

1. *Limited Liability Coverage* based on a per pound minimum. This can be as low as \$0.10 per pound or as high as \$6.00 per pound. The average, however, is probably \$0.60 per pound. This option is generally at no extra cost to the shipper or storage customer.
2. *Depreciated Value Coverage or Actual Cash Value*. When selecting this option, a shipper or storage customer must state a fixed dollar amount for the property being moved or stored. This "stated value" often has per pound minimums – these minimums range from \$2.50 per pound to \$5.00 per pound of estimated or actual weight.

There is generally an additional charge for this coverage option. In claim settlement, a deduction is taken for the age and condition of the item that has been lost or damaged. Your tariff may allow a deductible for this option.

3. *Replacement Cost Value or Full Value Protection*. This option is similar to #2 above in that a value must be declared and an extra cost charged. However, in claim settlement, a new or replacement item will be provided for the one that has been lost or damaged. Your tariff may allow a deductible for this option.

The valuation option selected by the customer must be shown on the Bill of Lading, Warehouse Receipt, Storage Contract, Order for Moving Service, or whatever form constitutes the contract between mover and shipper or storage customer. To be legally valid, this form must be signed by both parties.

The valuation option should be the same for transit/storage/transit. You should only change the valuation after the property has been re-inventoried to identify any losses at the previous valuation level.

Because the language of the Bill of Lading or Warehouse Receipt is often confusing, there are additional forms that can be used to clearly explain the options available.

ADVICE OF COVERAGE FORM -- This is a two-part form that can be given to shippers or storage customers. The wording complies with nearly all moving tariffs and explains the coverage clearly. Please check with your individual state's rules to ensure compliance.

Forklift Safety

Powered industrial trucks are essential to many operations because of their efficiency in handling materials. However, their use introduces significant hazards of fire, explosion, water damage, physical and mechanical damage. Losses include bodily injury, property damage and business interruption. Severe property and personal injury losses occur when the masts or forks of trucks strike people, walls, columns, or production machinery.

Loss Control Methods

Loss control may be practiced in three distinct areas:

1. Equipment design
2. Operator training
3. Control of the working environment

For our purposes, we are only going to address the latter two areas in this guide. Industrial truck design criteria are embodied in standards generated by the American National Standards Institute (ANSI) under the general numerical heading of B56. Other standards with design recommendations include: The National Fire Protection Association Standard, NFPA 505 and Underwriters Laboratories, Inc. (UL) Standard UL 583, and UL 558.

Qualified equipment suppliers should be consulted concerning selection of forklifts to meet the safety and job performance requirements of each particular material handling need.

Operator Training

OSHA Safety and Health Standards, 29 CFR 1910, deal with worker safety considerations and requires that "only trained and authorized operators shall be permitted to operate a powered industrial truck." OSHA field personnel have generally interpreted this to mean a formal training program of some nature. You may either develop your own training program or utilize a course offered by a local community college or technical school. Most equipment dealers offer training programs for their customers.

As a minimum, the program should include classroom training accompanied by an appropriate film or video. A written test should be used to document the operator has successfully completed the course. A record should be kept in the individual's personnel file. Booklets and videos are available from many sources. Your TRANSGUARD loss control representative may also have additional sources of training materials.

Training of industrial truck operators is essential to prevent personal injury, and also to prevent property damage. The operation of an industrial truck differs basically from that of an automobile or conventional truck in the following ways:

- generally steered by the rear wheels
- steers more easily when loaded than when empty
- often driven in the reverse direction as much as in the forward direction
- often steered with one hand, the other hand being used to operate the controls

Lift Truck Safety Rules and Regulations

The following are suggested safety rules:

Truck Operations

- Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.
- No person should be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.
- Unauthorized personnel should not be permitted to ride on powered industrial trucks.
- Arms or legs are prohibited from being placed between the uprights of the mast or outside the running lines of the truck.
- When leaving a powered industrial truck unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shut off, brakes set, and key removed from ignition. Wheels shall be blocked if the truck is parked on an incline.
- A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock or platform or freight car.
- Trucks shall not be used for opening or closing vehicle, railroad, or building doors.
- Brakes of trucks, trailers, or railroad cars shall be set and wheel blocks shall be in place to prevent movement when entering for loading or unloading. If fixed jacks are necessary to support a semi-trailer during loading or unloading when the trailer is not coupled to a tractor, the jacks should be connected before loading or unloading begins. The flooring of trucks, trailers, and railroad cars shall be physically inspected for breaks and weakness before they are driven onto.
- There shall be sufficient head room under lights, pipes, sprinkler systems and other overhead installations.
- An overhead guard shall be used on each lift truck as protection against falling objects.
- A load backrest extension shall be used on each lift truck whenever necessary to minimize the possibility of the load, or part of it, from falling to the rear.
- Only approved and explosion-proof rated trucks shall be used in hazardous locations where there is a potential of an explosion.
- Whenever a truck is equipped with vertical only, or vertical and horizontal controls elevate with the lifting carriage, or forks for lifting personnel, the following additional precautions shall be taken for the protection of personnel being elevated -- Use a safety platform firmly secured to the lifting carriage and/or forks. Means shall be provided whereby personnel on the platform can shut off power to the truck. Such protection from falling objects as indicated necessary by the operating conditions should be provided.
- Spinner knobs must not be attached to the steering wheel of trucks not originally equipped with such.
- Fire aisles, access to stairways, and fire fighting equipment shall be kept clear and accessible.
- Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided. No smoking allowed while fueling.
- Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel cap replaced before restarting the engine.
- Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tank.

- No unauthorized equipment shall be installed and/or used on any truck.
- All accidents involving lift trucks, regardless of the extent of injury, property or material damage, shall be reported immediately to the supervisor in charge.
- Hard hats and other designated personal protective equipment must be worn while operating a lift truck.
- All lift trucks shall be physically inspected by the operator before use. The designated inspection form shall be used.

Traveling

- Speed limits shall be observed and a safe following distance shall be maintained, approximately five lengths from the truck ahead, and the truck shall be kept under control at all times.
- The right of way shall be yielded to pedestrians and emergency vehicles.
- Other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations shall not be passed.
- The driver shall slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall travel with the load tailing.
- Railroad tracks shall be crossed diagonally whenever possible. Parking closer than 8 feet from the center of railroad tracks is prohibited.
- The driver shall look in the direction of travel and keep a clear view of the travel path.
- Grades shall be ascended or descended slowly.
- When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.
- Unloaded trucks should be operated on all grades with the load engaging means down grade.
- On all grades, the load and load engaging means shall be tilted back, if applicable, and raised only as far as necessary to clear the road surface.
- Under all travel conditions the truck shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
- Stunt driving and horseplay shall not be permitted.
- The driver shall slow down for wet or slippery floors and where other adverse conditions are encountered.
- Dockboard or bridge plates shall be properly secured before they are driven over. Dockboard or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded.
- Elevators shall be approached slowly, and then entered squarely after the elevator car is properly leveled. Once on an elevator lift truck controls shall be neutralized, power shut off, and the brakes set.
- Motorized hand trucks must enter an elevator or other confined area with load end forward.
- Running over loose objects should be avoided.
- While negotiating turns, speed shall be reduced and the steering wheel turned in a smooth, sweeping motion. When maneuvering at a very slow speed, the hand steering wheel shall be turned at a moderate, even rate.
- Carry all loads 6 to 8 inches off ground.
- Loads shall not be lifted while traveling.

Loading, Unloading and Stacking

- Lift trucks shall not be operated when overloaded. Check load plates for load limitations.
- Unstable or loosely stacked loads should not be handled.
- Loads shall be flush against fork backs.
- All loads shall be approached slowly and straight on.
- Inching feature of lift truck shall be used when loading and stacking.
- When depositing a load, enter the area squarely.
- All actions raising and lowering forks should be slow and smooth without jerking. Abrupt moves shall be avoided.
- All stacking should be safe and neat and instructions followed as to stacking height.
- Load shall be deposited and picked-up only in designated areas. Do not stack materials in aisles or roadways or block fire exits, fire fighting or other emergency equipment.
- Extreme care shall be exercised when tilting a load, particularly when high-tiering. An elevated load shall not be tilted forward except in a deposit position. Use only enough backward tilt to stabilize the load.
- Butting and ramming a load with a lift truck is prohibited.

Maintenance

- Modifications or additions that affect capacity or safe operation cannot be made without the manufacturer's prior written approval.
- Keep all nameplates and marking in place and legible.
- Maintain overhead guard in place and in good condition.
- Gasoline and diesel fuel must be handled and stored in accordance with NFPA 30.
- Batteries shall only be charged in designated areas.
- In charging areas, means shall be provided for flushing and neutralizing spilled electrolyte, for fire protection, for protecting the charging apparatus from damage and for adequate ventilation.
- Battery racks should be non-conductive or covered with spark-proof materials.
- A hoist or conveyor shall be provided to handle batteries.
- Electrolyte shall be handled by means of a carboy tilter or siphon.
- Each truck shall be properly positioned and have its brakes applied prior to charging or changing batteries.
- Keep vent caps in place while charging, but open battery compartment covers to dissipate heat.
- Smoking is prohibited in any battery charging area.
- Precautions shall be taken to prevent open flame, sparks or electric arcs in charging areas.
- Tools or other metal objects shall be kept away from the tops of uncovered batteries.
- Carbon monoxide levels must be kept below 35 ppm in operating areas.
- When found to be unsafe a truck shall be taken out of service and tagged.
- Repairs to trucks can only be made in designated areas by authorized personnel.
- Trucks shall be kept clean, free of lint, excess oil and grease.

- All replacement parts shall be equal in safety to the ones they replace.

Control of the Working Environment

The third element in a loss control program for industrial trucks is control of the working environment.

Lighting - Accidents have occurred in warehouses because the industrial truck operator did not see a fellow employee or misjudged the distance of a fixed object simply because of poor lighting. The recommended level of illumination in warehouses is a minimum of 20 foot-candles (ANSI A132.1).

Working Surface - An industrial truck should be operated on a smooth, level surface. Uneven surfaces may cause the truck to bounce and the load to shift with disastrous results.

Hazardous Atmospheres - Conventional industrial trucks should never be used in unventilated areas. Gasoline or diesel powered trucks must only be used in an area where exhaust products will be safely vented. Electric trucks may be substituted in some situations. Environments containing hazardous industrial by-products or combustible chemical fumes require the use of special trucks designed specifically for this purpose. More details on this topic will be found in OSHA Safety and Health Standards 29 CFR 1910.178.

Self Inspection Program

Introduction

The objectives of self inspection are to identify hazardous conditions and unsafe employee behaviors that may contribute to an accident. This information will help determine what actions can be taken to reduce or eliminate accident producing situations. Additionally, self inspection will help determine the extent to which employees adhere to the company's safety program, operating procedures, rules and regulations. An effective self inspection program will help protect company assets and reduce the number of accidents.

Developing a self inspection program and checklist requires the attention of someone who has a sound knowledge of company operations and some knowledge of relevant safety standards and local codes. The self inspection program is a fact finding process with emphasis toward detecting potential hazards. It should be approached in systematic steps with a method of reporting, evaluating and using inspection results to make corrections.

Responsibility

Supervisors should inspect their departments daily to ensure they are safe and that proper procedures are being followed. Workers should inspect their work areas constantly to ensure hazardous conditions are identified and corrective action taken. It may be a responsibility of the safety committee to perform periodic safety inspections and to record inspection results. The maintenance department or those having correction or repair responsibilities should promptly take action to correct deficiencies and ensure proper follow-up.

The accompanying checklist presents ideas for use in developing a self inspection form. Any checklist developed should be specific for each area of the facility to be an effective accident and fire prevention tool.

Six questions should be answered when developing a self inspection program:

- What areas and items need to be inspected?
- What aspects of each needs examination?
- What conditions or actions need to be inspected or monitored?
- How frequently should inspections be conducted?
- Who will conduct inspections?
- What reports and records are needed?

What Areas and Items Need To Be Inspected?

- The first step is to take a hazard inventory. This is done best by dividing the operation into physical areas (yard, trucks, building, departments, machinery or other suitable divisions).
- Once specific areas of inspection have been determined, employees familiar with those areas should research applicable standards, regulations (laws), and codes for each item in that area. One of the first places to check are OSHA regulations. A list of items to be inspected can then be considered.

What Aspects of Each Needs Examination?

- The parts or steps of functions that create hazardous conditions when performed improperly or due to unsafe equipment should be evaluated first.
- Evaluate functions that can create unsafe or unhealthy conditions due to:
 - Noise
 - Stress
 - Wear
 - Impact
 - Vibration
 - Heat
 - Corrosion
 - Misuse
 - Neglect
 - Lack of Training
- Safety devices, guards, controls, wear point components (where things rub together), electrical and mechanical components and fire exposures (such as flammable liquids) will become unsafe first.
- Critical parts of machinery and equipment include the point of operation, drives, moving parts, and accessories. Also to be checked are feeding operations, oiling, adjusting, maintenance, electrical grounding, adequacy of workspace and location.

What Conditions or Actions Need to be Inspected or Monitored?

- The unsafe conditions to be inspected for, and each action to be examined, should be described specifically and clearly. Words such as jagged, exposed, broken, frayed, leaking, rusted, corroded, missing, vibrating, loose or slipping should be used to describe conditions. Sometimes exact figures are needed; for example maximum pressure or percentages.
- Unsafe behaviors or acts need to be identified during an inspection. In general, they might include but not be limited to:
 - Failing to use or maintain (or using improperly) personal protective equipment
 - Using machinery or tools without authority
 - Operating at unsafe speeds or other unsafe work practice
 - Removing guards or safety devices or rendering them ineffective
 - Using defective tools or equipment or, using tools or equipment in unsafe ways
 - Repairing or adjusting equipment in motion, under pressure, or electrically energized
 - Creating unsafe, unsanitary, or unhealthy conditions by improper personal hygiene
 - Poor housekeeping or smoking in unauthorized areas

How Frequently Should Inspections be Conducted?

Inspection frequency is determined by four factors:

- **What is the loss severity potential?** Ask, what would happen if the item or critical part failed, or if the procedure was not followed. The greater the loss severity potential, the more often the item should be inspected.
- **What is the potential for injury to employees?** If the item failed or the procedure was not followed, how many employees would be endangered. Higher levels of danger require frequent inspection.
- **How quickly can the item or part become unsafe?** Factored into the answer should be amount of use, probability of abuse, delicacy of item or part, and ease of detecting an unsafe condition during regular operations.
- **What is the past history of problems, and what were the results of these problems?** Maintenance, production, and accident records should be reviewed and compared to each other.

It is important to remember, certain inspection frequencies are mandatory under OSHA, EPA, DOT or other local, state or federal regulations.

Who Will Conduct Inspections?

- In order for a self inspection plan to be effective specific inspection responsibilities should be assigned. A guide for planned inspections follows:
 - *Weekly* - For specific items by electricians, service/installation personnel, maintenance or designated production staff.
 - *Monthly* - By supervisors
 - *Quarterly* - By department heads and safety and health committees
- Individuals conducting inspections should:
 - be knowledgeable of past accidents or losses occurring in the area
 - understand potential hazards which may be created due to unsafe work practices, equipment, or conditions
 - be able to recommend measures which will correct hazardous conditions and practices

What Reports and Records are Needed?

A record of each inspection should be maintained. Inspection records should be retained for review and comparison for trends. Usually three years of records is sufficient for this analysis.

- **Checklists**

Self inspection checklists are invaluable if properly designed and used. They serve as reminders of what to look for, and as records of what has been covered. If an inspection is interrupted, a checklist will aid in knowing what has and has not been done. Good checklists help with follow-up. Hazards observed and not on a checklist should still be recorded. Checklists should be revised periodically. They should be reviewed and revised:

- Immediately when changes are made in facilities or equipment
- Annually

- **Reports**

Every inspection should be followed by a written report to the appropriate individuals. The report should be directed to the supervisor(s) concerned and to management when an inspection is conducted by the safety committee or other group. Reports should:

- Outline each hazard found and indicate its seriousness
- Recommend corrective action
- Suggest a time frame for corrective action and follow up

Reports are usually grouped into three types:

- *Emergency* - Is made without delay when a critical or catastrophic hazard is probable.
- *Periodic* - Covers those unsatisfactory non-emergency conditions observed during a planned inspection. This report should be completed within three days of an inspection.
- *Summary* - Lists all items contained in previous periodic reports for a given time period.

Examples of many items that should be considered in any report form are attached.

Using self inspection reports that are detailed and provide suggestions for corrective action, management can easily assess needed changes in programs, schedules, budgets, manpower and facilities.

PROPERTY SELF-INSPECTION CHECKLIST

Inspected by: _____ **Date:** _____

Submitted to (manager): _____ **On:** _____

Inspection Item	Action Needed	Date Corrected
1. Is housekeeping adequate		
2. Are aisles well marked and kept clear		
3. Are doorways unobstructed and clearly marked		
4. Are packing materials properly stored (boxes, pallets, packing materials)		
5. Are trash and used packing materials removed		
6. Is saw dust removed from floors and equipment		
7. Are flammable liquids properly stored		
8. Are propane and other compressed gas cylinders properly stored and secured		
9. Is welding and cutting done only in segregated areas and by designated personnel		
10. Is there proper clearance in front of all heating equipment		
11. Are all hazardous operations properly controlled and protected		
12. Are emergency phone numbers posted		
13. Is all vegetation cut back from building		
14. Are forklifts refueled in proper areas		
15. Is storage neat and orderly		
16. Is hazardous waste properly stored and disposed of		
17. Are heat producing sources regularly inspected and maintained		
18. Is the automatic sprinkler serviced quarterly by an outside sprinkler service contractor		
19. Have employees been trained in fire extinguisher usage		
20. Are fire extinguishers charged, tagged and inspected		
21. Is the entire fire alarm system, heat and smoke detectors regularly inspected, tested and maintained		
22. Has fire preplanning been done with the local fire department		
23. Are fire doors in proper working order and not blocked open		
24. Is the plan updated when alterations are made		
25. Are pest/rodent controls in place		

Comments:

PREMISES LIABILITY SELF-INSPECTION CHECKLIST

Inspected by: _____ **Date:** _____

Submitted to (manager): _____ **On:** _____

Inspection Item	Action Needed	Date Corrected
1. Are all exits properly and clearly marked		
2. Is an emergency plan posted		
3. Is emergency lighting provide throughout the facility		
4. Are there at least two means of egress from all areas		
5. Are parking areas, walkways, entrances clear with no slipping and/or tripping hazards		
6. Are all stairs, halls and other walking surfaces clean with no slipping and/or tripping hazards		
7. Is snow and ice removed promptly or otherwise controlled		
8. Are aisles well marked and kept clear		
9. Are lighting levels adequate at all times when the facility is occupied		
10. Are all fuel or other tanks properly enclosed or otherwise contained		
11. Are fuel or other tanks monitored, tested, and have leak detectors		
12. Are waste materials properly stored and regularly disposed of		
13. Are all hazardous areas restricted from access by unauthorized personnel		
14. Are fuel pumps, fuel tanks, and liquid propane tanks protected from physical damage using steel pipes or stanchions		
15. Are necessary fire detection and suppression systems in place, regularly inspected, tested and maintained		
16. Are flammable and combustible materials stored properly		
17. Is smoking restricted to designated areas and "no smoking" signs posted		
18. Is the facility adequately fenced and secured with locking gates		
19. Are there security locks on doors leading to restricted areas		
20. Are first aid supplies and equipment available		
21. Are employees trained in first aid		
22. Are restroom areas clean and sanitary		
23. Are there procedures in place for the reporting of unsafe condition to management		
24. Is access to the facility limited to employees only		
25. Are guests required to sign in and be accompanied by a member of management while on the site		
26. Are incidents and accidents investigated by management		

Comments:

GENERAL LIABILITY SELF-INSPECTION CHECKLIST

Inspected by: _____ **Date:** _____

Submitted to (manager): _____ **On:** _____

Inspection Item	Action Needed	Date Corrected
1. Walking and Working Surfaces in good condition		
2. Emergency Lights working		
3. Aisles marked		
4. Stair clear and in good condition		
5. Exits unobstructed		
6. Exits clearly marked		
7. Ladders in good condition		
8. Housekeeping good		
9. Pads folded and stored		
10. Work areas free of trash		
11. Combustible dust vacuumed		
12. Smoking areas designated and signs posted		
13. Fire extinguishers in place and accessible		
14. Extinguishers and Hose stations inspected and tagged		
15. Sprinkler heads have at least 18" clearance		
16. Fire doors in proper working order and not blocked open		
17. Flammables properly stored		
18. Containers properly labeled		
19. Storage areas stable		
20. Pallets properly stored		
21. Hazardous waste properly stored/disposed of (shop)		
22. Machine guards in place (saws)		
23. Electrical cords undamaged		
24. Hand tools in good condition		
25. Personal protective equipment worn as required		

Section 6

Accident/Incident Investigation

	<i>Page</i>
<i>Introduction & Why Accidents Happen</i>	<i>69</i>
<i>Reporting Basic Information</i>	<i>69</i>
<i>Interviewing People</i>	<i>71</i>
<i>Vehicle Accident Investigation</i>	<i>72</i>
<i>Accident Analysis</i>	<i>73</i>

Accident/Incident Investigation

Introduction

The reason for taking the time to investigate an accident is to determine how it happened, so it can be prevented in the future. What has already happened has happened it cannot be changed. Fixing blame on someone for an accident does not accomplish anything. The purpose of investigating accidents is not to fix blame, rather it is a study in accident causation that promotes actions to correct the cause and prevent reoccurrence of similar accidents.

In almost all cases, there is more than one reason why an accident occurred. These reasons act together to form a chain of events which lead to the accident. Accident investigation is intended to identify these events and provide information to modify them in the future. Withholding a tendency to fix blame on one or more persons allows investigators to keep an open mind, and help them look for the real causes.

Why Accidents Happen

A general understanding of how accidents happen can help determine why a particular accident occurred. Some basic ideas are:

- Accidents do not happen by chance, or by luck, they are caused. One or more of four factors cause accidents, these are: people, equipment, materials and environment.
- Usually, more than one reason is behind an accident. Many events occur in specific sequence and at specific times, in such a way that they form a chain, which ends in an accident.
- Chance plays the role of bringing events together at a precise time and place so that they form a chain leading to an accident. However, conditions surrounding these events already exist.
- The conditions surrounding each event can be identified, and actions taken to modify or eliminate them. That way, one or more events should not occur, breaking the chain, thereby preventing accidents.

Knowing About Accidents

First, supervision and management need to know that an accident has occurred, before they can do anything. Usually they have no difficulty finding out about accidents that involve injuries or property damage. However, they are not always told about accidents that almost resulted in injuries or damage (near-miss accidents). Often people do not report such incidents for a variety of reasons. Supervisors need to use their skills to convince and motivate their staff, making them comfortable enough to tell them about near-miss occurrences.

Reporting Basic Information

An accident report form is usually used to gather and report accident information. Such forms have spaces provided to record basic information such as what happened, where, when, who was involved, description of equipment, tools, materials, environmental conditions involved, corrective actions taken immediately after the accident, and possibly other information.

The most important information to be obtained is the description of what happened. Before writing down a description, talk to the persons involved in the accident and any witnesses.

Listen to their stories, study the accident scene, think about all the information gathered, and then present a summary of that information as a description of what happened. Some ideas about how to gather information from people by interviewing them are discussed later in this section.

The timing of information gathering is very important, especially with liability incidents involving the public. An investigation should be completed immediately after taking care of any injured person, and correcting hazards resulting from the accident. Even a short delay of a few hours could result in people forgetting details of what they saw, or becoming biased in their views after listening to others. Also physical conditions which may provide clues could be disturbed.

Thinking of Causes

After an accurate and complete description of what happened has been developed, the next step is to determine why it happened. Ask WHY it happened, think of one or more reasons, and for each reason, again ask why they existed. This way, you keep probing. In fact, you try to recreate the chain of events whose end was the accident. You may come up with different chains of events attached to the main chain - producing a tree. An example of an employee accident follows:

Mary was carrying a large carton when she tripped over an electric cord that was lying across an aisle adjacent to a desk. The carton blocked her vision to some extent, and the lighting in the area was poor (No injury or damage to materials was sustained).

Accident Causes:

- **WHY was the cord in the aisle?** - "The electric cord was not routed under the desk and secured."
- **WHY didn't Mary use a hand cart to move the large carton?** - "The cart was not handy and Mary did not realize her view would be obscured."
- **WHY didn't Mary know of the problems of carrying large cartons?** - "She never had an accident moving cartons, and no one had instructed her not to do so."
- **WHY was Mary not instructed in material handling?** - "Because her supervisor assumed that she knew, and it did not appear to be very important before the accident."
- **WHY was the lighting poor?** - "There is not enough light when it is raining or dark outside."

Even such a simple situation as this example indicates how accident investigation can be utilized to develop information and corrective action to help prevent a reoccurrence. Also, a thorough accident investigation must be documented and should include:

- **Who** was injured, was the individual qualified, impaired in any way?
- **What** was the injured person doing when the accident occurred and, if appropriate, the purpose of the activity?
- **Where** did the accident occur? If job related, was this the best place to perform the task?
- **When** did the accident occur? If job related, was this the best time to perform the task?
- **Why** was the action or situation necessary?
- **How** did the accident occur, the contributing causes (equipment, material or people)? How can similar accidents be prevented?

These principles apply to accidents involving the general public, motor vehicles, fires and work related occurrences.

Interviewing People

Interviewing people to obtain information for the purpose of determining accident causes is a difficult task, and requires skills. The following guidelines will assist in this task.

Whom to Interview

- People involved in the accident,
- People who may have witnessed it, and
- People who may have knowledge about the events or conditions preceding the accident.

When to Interview

- As soon after the accident as possible. But, any injured persons must receive medical treatment first, before they are interviewed.

Where to Interview

- Interviewing people at or near the site of an accident can help them remember, and they can explain things that could not be explained otherwise. If interviews cannot be held at the site, photographs or sketches of the area can be used during the interview. Wherever the interview location, it should provide privacy and only one person should be interviewed at a time.

Interviewing Steps

In general, interviewing should include the following steps:

- **Put the person at ease** - Usually everyone interviewed will have fears or concerns that make them reluctant to provide complete facts about accidents. They may be embarrassed, afraid of disciplinary action, unwilling to place blame on others, or have other reasons. Putting people at ease and developing rapport are necessary for gathering useful information. You can do the following to help put them at ease at the beginning of an interview:
 - be courteous and friendly, not intimidating
 - explain purpose of interview - that it is to determine facts, not fault
 - explain that you will take notes, and ask if they object. Don't take notes during the interview if they mind, or stop taking notes if they seem to be getting distracted by it. Keep note taking to the minimum. You can jot down your notes after the interview.
- **Ask the people to describe the accident** - Ask the person to relate their version of the accident, in detail. Do not interrupt with questions, comments, suggestions, or for any other reason. Be patient and keep silent while the person is collecting thoughts. Periods of silence can encourage one to provide more details. Be a good listener.
- **Ask questions to clarify** - After the description of the accident is completed, ask questions to clarify unclear or inconsistent points, and to fill-in missing details. The individual may have left out some details not considering them to be important or relevant. Following are a few tips about asking questions:

- ask one question at a time
- make questions as simple as possible
- don't ask leading questions (one that contains the answer), or questions that can be answered by a simple Yes or No (for example, instead of asking; "weren't you careless when you carried the large box instead of using a cart?" ask; "how often do you carry large boxes by hand, and how often do you use a cart?")
- avoid asking; "Why did you do it," because it may make the person defensive.
- Instead ask for facts, such as what they were doing and how they were doing it.
- don't argue.
- ask straight forward and frank questions - not shrewd and tricky ones.
- **Repeat what you understood** - Repeat the story to make certain you understood what was said. Go over each major point with the person. This will provide them a chance to correct anything you may have misunderstood.
- **If an employee is involved ask for ideas to help prevent recurrence** - Ask what are your ideas, thoughts or opinions of corrective actions needed. Often, they can provide valuable input. Also, asking them for their input makes them feel important, and shows them that you are sincere about accident prevention.
- **Thank the person** - Express your sincere thanks, and ask them to contact you later, if they remember anything else about the accident.

Vehicle Accident Investigation

Each vehicle should have an "Accident Report Kit" in the glove compartment. This kit provides the vehicle operator everything needed to gather information at the scene of an accident. The police and the immediate supervisor should be informed immediately of all accidents and witness cards completed whenever possible. At the time of every accident the vehicle operator is responsible for obtaining the information necessary to protect company assets.

All incidents, no matter how minor, should be reported to the immediate supervisor. The insurance agent should also be notified immediately.

DRIVER CONDUCT AT THE SCENE OF AN ACCIDENT

- **Stop** - Stop and actuate four-way flashers, failure of the vehicle operator to stop at the scene of an accident is a criminal offense.
- **Protect the scene** - Lose no time setting flares or emergency reflectors in accordance with Department of Transportation safety regulations. One warning device 100 feet in each direction from the scene and one near the scene. (Set signals further out, but not over 500 feet away, if an accident occurs near a curve or a hill crest.) Use extreme caution with flame-producing emergency signals if there is spilled fuel present. Request reliable bystanders to help control traffic, if necessary. Do not move, or allow to be moved, any vehicles until someone arrives who can verify or witness their position and other critical details.
- **Assist injured** - Assist any injured person but do not move them unless necessary. Keep them as warm and quiet as possible pending the arrival of an ambulance, doctor, or other competent person to handle their removal.
- **Notify authorities** - if you cannot get to a nearby phone, write a carefully worded note giving the location and apparent seriousness of the accident and give it to a reliable appearing motorist. Ask

them to notify police and the company for you. Do not leave equipment or cargo unguarded except in an extreme emergency. In case of a serious accident, and in every case involving injuries be sure your insurance company is contacted without delay. When reporting an accident by telephone or messenger, be specific as to location, time, extent of injuries or damage, condition of cargo, and where you can be reached.

- **Obtain information** - Obtain name and address of all witnesses. If a witness refuses to provide their name, note their vehicle license number. If there are no witnesses, get the name and address of the first person to arrive at the scene. Be polite, give your name, the company name, and offer to show your commercial driver's license. Do not discuss the accident with anyone except police, representatives of the company, and your insurance agent. Any statements you make may be used against you later. Regardless of the circumstances; admit nothing, promise nothing and do not argue. Take pictures of the accident scene.

Vehicle Accident Information Checklist

The following information is necessary to develop a complete accident report:

- Exact location and date
- Make, model, type, and license number of every vehicle involved
- Names and addresses of all persons involved; drivers, owners, and passengers
- Names of injured and extent of injury
- Names and addresses of insurance companies providing coverage for each vehicle and other property involved
- Name and addresses of all witnesses
- Jurisdiction, name and badge number of police officers at scene
- Diagram of accident scene
- Time of day and weather conditions
- Street names
- Width of streets and number of lanes
- Directions of travel of vehicles
- Points of impact on highway and vehicles
- Location of vehicles after accident and before they are moved
- Length of skid marks, show starting point, being sure to identify the marks with the vehicle involved
- Traffic controls at scene; lights, stop signs, speed limit, etc.

Accident Analysis

In order for any loss prevention and control program to be effective, it must meet the continuing and changing needs of the organization. Any safety program must continue to monitor itself to be effective. One method of monitoring is through accident analysis. An effective analysis of past accidents shows trends and points out areas of potential change or increased emphasis.

Periodically accidents should be reviewed and analyzed for trends. The accident types having the largest number of incidents and the most severe need to be further examined in detail. As similarities are

revealed, changes in policies and procedures to prevent future similar incidents can then be developed and implemented.

Your insurance agent and TRANSGUARD'S loss control department can provide assistance to help identify accident frequency and severity trends. TRANSGUARD can be contacted at 800-252-6725.

Section 7

Safety Resources

Safety Resources

Safety and Health Associations and Vendors

- **National Safety Council**
1121 Spring Lake Drive
Itasca, IL 60143
708-775-3534

Central Region Office, Itasca, IL; 800-621-7615
Northeastern Region Office, Syracuse, NY; 800-432-5251
Western Region Office, Redwood City, CA; 800-544-1030
Mid-Atlantic Region Office, Richmond, VA; 800-633-2208
Southeastern Region Office, Atlanta, GA; 800-441-5103
National Safety Council Strategic Alliance, Des Moines, IA; 800-568-2495

The National Safety Council, and most state councils, have a variety of materials and publications available for purchase. Contact them direct for a complete catalog. A few examples of publications and materials available are:

- Supervisors Safety Manual
- Motor Fleet Safety Manual
- A wide variety of information concerning production and safety topics
- Hazard Communication and SARA Programs; 800-621-6244
- Periodic Safety Bulletins
- Packaged safety training programs
- Principles of Occupational Safety & Health
- Safety Management Techniques
- Accident Investigation/Safety Inspections
- Job Safety Analysis
- OSHA Compliance
- Top Driver - Take Control; 1-800-799-4672

- **National Fire Protection Association**

Batterymarch Park
Quincy, MA 02269-9990
800-344-3555

- National Electrical Code Handbook
- Fire Protection Handbook
- National Fire Protection Association Codes

- **Best's Safety Directory**

A.M. Best Company
Ambest Road
Oldwick, NJ 08858-9988
908-439-2200

A buyers guide that provides information on recognized safety and industrial hygiene products and services.

- **Driver's Alert**

5340 N. Federal Highway, Suite 100
Lighthouse Point, FL 33064
800-443-9600

A 1-800 driver behavior monitoring service that provides reflective decals for vehicles, incident reports, driver reports, and fleet profile reports

- **Coastal Training Technologies Corporation**

3083 Brickhouse Court
Virginia Beach, VA 23452
www.Coastal.com
888-383-8350

Safety training products: Videos, CD-ROMs, Web-based courses, etc

- **Transportation Safety Technologies**

2400 Roosevelt Avenue
Indianapolis, IN 46218
www.tst-corp.com
800-428-4449

Offers sensor-based technology that alerts drivers of blind spot obstacles. Up to seven sensors can be installed on tractor-trailer type vehicles.

- **J.J. Keller & Association**

145 West Wisconsin Ave.
P.O. Box 368
Neenah, WI 54956-0368
www.kellerOnline.com or www.jjkeller.com

800-558-5011

Driver training programs and videos
Driver safety bulletins

- American Driving Records –
Internet address: www.mvrs.com
Telephone:
Nationwide: (800)766-6877

Motor vehicle record access service nationwide

- **FLI Learning Systems, Inc.**
P.O. Box 2233
Princeton, NJ 08543-223
609-466-9000

Various driver training programs and videos
Available on three day free preview

- **Smith System Driver Improvement Institute**
www.smith-system.com
800-777-7648

Driver programs

- **American Red Cross**
Mosby Lifeline
11830 Westline Ind. Drive
P.O. Box 445908
St. Louis, MO 63146
800-325-7680

First aid and CPR training

- **C.A. Short Company**
4205 East Dixon Blvd.
P.O. Drawer 310
Shelby, NC 28150
800-535-5690

Incentive safety award products