BEST'S HAZARD INDEX

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SIC CODES AND CLASSIFICATIONS

7533	Automotive Exhaust System Repair Shops
7537	Automotive Transmission Repair Shops
7538	General Automotive Repair Shops
7539	Automotive Repair Shops, Not Elsewhere Classified
7549	Automotive Services, Except Repair and Carwashes

NAICS CODES AND CLASSIFICATIONS

488410	Motor Vehicle Towing
811111	General Automotive Repair
811112	Automotive Exhaust System Repair
811113	Automotive Transmission Repair
811118	Other Automotive Mechanical and Electrical Repair and Maintenance
811191	Automotive Oil Change and Lubrication Shops
811198	All Other Automotive Repair and Maintenance

RELATED CLASSIFICATIONS

Automobile Accessories Stores
Automobile Body Repair Shops
Automobile Dealers - New and Used - Retail
Convenience Stores
Gasoline Stations - Full-Service and Self-Service
Tire Dealers - Retail
Towing and Recovery Services
Vocational-Technical Schools - Public and Private

SPECIAL EXPOSURES

Improper use of equipment
Mechanics' tools
Misdiagnosis of vehicle problems
Student interns

RISK DESCRIPTION

Automobile repair shops perform services and repairs on automobiles and light trucks (e.g., pickups, SUVs, minivans, etc.), handling an average of 57 jobs per week at an average cost of about $300 each. Some insureds will specialize in certain types of automotive work, such as the installation of brakes, exhaust systems, tires, and/or shock absorbers; the servicing of radiators and air conditioning systems; or transmission repairs. While some outfits may perform body work (e.g., repainting cars and/or repairing external damage sustained during collisions), this is generally considered to be a distinctly different type of operation and is covered as a separate classification.

Oil change centers (also known as "quick lube" shops) provide mostly oil changes and other preventive maintenance services to cars and light trucks. In 1987, there were just 2,500 oil change centers in the United States; by the year 2000, that number had grown to over 15,000. Although the growth of this industry has slowed somewhat as the market has become increasingly saturated, the need for such operations has been largely attributed to the rise in dual-income, two- car households. Although it is estimated that 40% of American car owners still change their own oil, "baby boomers" seem to be more willing to pay for the convenience of having someone else do it for them. According to a 1999 survey conducted by the National Oil and Lube News, 82% of oil change centers' business comes from oil changes. The remainder is generated by various "add-on" services that many centers have expanded their operations to include, such as: engine and radiator flushes; replacement of air filters, belts, spark plugs, and wiper blades; air conditioner service; fuel injection cleaning; and tire rotation/repair. Some outfits also perform state inspections and emissions testing. On a typical day, an oil change center will service an average of 43 vehicles.

Most auto repair shops will also perform such routine maintenance services, but are likely to have more experienced technicians who possess the mechanical expertise to handle more complicated automotive repairs. Both repair shops and oil change centers often include secondary operations as part of their overall setup. Such "side" operations may include: towing; the sale of car stereos, accessories, fluids, basic parts (e.g., spark plugs, wiper blades, air or oil filters, etc.); the sale of wheels, tires, and hubcaps; or the sale of petroleum products (e.g., gasoline, diesel fuel, kerosene, propane gas, etc.). An increasing number of outfits are also adding fast food restaurants, convenience stores, and/or car washes to their operations.

The average American household owns two or more vehicles, all of which will require preventive maintenance and repairs from time to time. In an average year, an individual consumer will spend an estimated $750 - $1,100 on vehicle maintenance and/or repairs. The motor vehicle aftermarket industry encompasses all products and services purchased for light trucks and automobiles after their original sale. Its representative association, the Automotive Aftermarket Industry Association (AAIA), reported that for the year 1999, the vehicle service and repair industry generated a total of $109.8 billion in income.

According to the most recent figures available from the Bureau of Labor Statistics, there are currently 68,390 independent general auto repair facilities in the United States, each with annual gross revenues ranging from $100,000 to $1 million, depending on the size and scope of the operation. Independently-owned shops comprise 95% of the auto repair industry, while the remaining 5% are affiliated with a chain or franchise that often specialize in certain types of repairs (e.g., transmission repairs, muffler or exhaust repairs, brake repairs, etc.). The percentage of oil change centers that are affiliated with a regional chain or national franchise is much

higher (approximately 20%) with the remainder being independent operations. Some oil change shops are company-owned. Consequently, the property may be owned by the business owner him/herself or by the affiliated company franchise and leased by the independent franchiser; the latter type of arrangement is more likely to be found with oil change centers since most auto repair shops are privately owned and operated. The average auto repair shop has been in business for nearly two decades, while the number of years in operation for oil change centers ranges from 7 - 15 years. Repair shops have an average of four technicians on their payroll, most of whom will be certified by the National Institute of Automotive Service Excellence (ASE) in one or more specialty areas. The majority of repair shop owners also hold ASE-certification in at least one area of specialty. While oil change centers do not require their service technicians to have the same level of expertise that repair shops do, many workers will have at least received certification in oil change and lubrication from the Automotive Oil Change Association.

Most auto repair shops and oil change centers will be freestanding structures, although some smaller operations may have an adjoining facility. Some insureds may operate several shops at various locations (if there are more than 10 locations, the insured is considered to be a "chain") while others will maintain only one shop. The layout of an automotive repair shop or oil change center will typically include a reception area or counter, two or more repair bays, a waiting area for customers, one or more offices, a stockroom where parts and supplies are stored, restrooms, and possibly a small kitchen or lunchroom for employees. Insureds that run side operations may also have a showroom where various auto parts, accessories, or tires are displayed for sale. Some insureds will provide a separate play area for children. At an increasing number of sites, secondary operations, such as a car wash, fast food restaurant, or convenience store, can be found. A separate garage for storing tow trucks and other company-owned vehicles may also be on the premises.

The hours of operation will vary, but most will be open Monday through Friday from 8 a.m. to 5 or 6 p.m., although some may remain open later a few nights out of the week for their customers' convenience. Many insureds also have Saturday hours (which may or may not be shorter than typical weekday hours), but most will be closed on Sundays. Many repair shops experience increased business during the summer and winter seasons since hot and cold temperature extremes can contribute to greater wear and tear on engine parts and/or cause them to fail. Oil change centers tend to experience an increase of business during the summer months when motorists are driving their vehicles greater distances on vacations and day trips, resulting in the need for more frequent oil changes.

The number of workers employed by auto repair shops can range from 3 or 4 to as many as 30 or 40, depending on the size of the operation and whether or not the insured maintains more than one facility. Typically, repair shops are actively recruiting and training new automotive technicians, since they are the ones who actually service customers' vehicles. Most automotive technicians (also known as mechanics) receive their training from specialized vocational-technical (vo-tech) programs offered by community colleges, high schools, or other post- secondary institutions. Some vo-tech schools require students to pass the appropriate ASE certification tests before they can receive their diploma, degree, or program completion certificate. Due to the fact that automotive technology is constantly evolving, continuing education for automotive technicians is essential if an insured is to remain competitive in this field. Most shops provide at least partial funding of their technicians' continuing education that may include auto manufacturers' seminars, aftermarket parts manufacturers' seminars, or in-house training (e.g., provided by the franchise or chain with which the insured is affiliated). Approximately two-thirds of all repair shops are actively involved in internship programs with local vo-tech schools or community colleges. Other employees of repair shops would include clerical and/or accounting personnel, a counter person who deals with customers and processes their repair orders, and/or (for insureds that sell used cars or have merchandise displayed in a showroom type of setup) one or two salespeople. In some cases, employees may operate as both salespeople and counter persons. Those that run secondary operations, such as car washes, convenience stores, or fast food restaurants, will require workers for those facilities as well. A more detailed description of workers' duties for these types of operations can be found in the Risk Descriptions of the appropriate classifications.

With auto repair shops and oil change centers, cars are usually driven onto the premises by their owners. However, when vehicles are inoperable, they may be towed in, either by the insured's own tilt-bed or tow truck, or by an outside towing service. If customers drop off their vehicles during the insured's off hours, they can fill out an envelope (usually provided in a box near the drop slot). These envelopes usually provide designated spaces where owners can write in their vehicle identification information (e.g., license plate number, year/make/model/color, etc.), relevant personal information (e.g., name, address, phone numbers), and explain the nature of the problem (e.g., rough idling, brakes squealing) or the service desired (e.g., oil change, state inspection). The vehicle's keys are then placed inside the envelope, and the customer drops it through a night drop slot, leaving their vehicle on the premises until the shop reopens.

Insureds' repair bays will be set up in one of two possible ways. Most repair shops and some oil change centers will be single story facilities where vehicles are driven into repair bays and then raised on hydraulic lifts if the technician needs to perform work on their underside. On the other hand, some insureds (particularly oil change centers) will be two-story facilities with drive-in repair bays on the ground level and technicians' work areas directly underneath them at the basement level. With this type of setup, technicians can work on the vehicles from underneath without the use of overhead hydraulic lifts. While some oil change facilities will allow customers to drive their vehicles into the repair bays themselves, others will have their own workers drive them into the bays. Depending on the insured's practice, oil change center customers may either remain seated inside their vehicles while they are being serviced or pass the time reading magazines or watching TV in the insured's waiting area; the latter type of setup is more typical of repair shops. While people are sitting inside their cars having an oil change performed, facilities may offer them hot coffee, provide phones for making local calls, or keep them entertained with mounted televisions.

For work that requires more than a day to complete, some auto repair shops will provide "loaner" vehicles for owners to drive temporarily; others may refer their customers to a nearby car rental agency. Some shops have formal, contractual agreements with a particular rental agency, while others have a more informal agreement by which they receive some form of concession (e.g., a commission) in exchange for customer referrals. It is not uncommon to find a car rental agency to which the shop refers all of its customers located adjacent to a repair shop, or even in the same building.

Once a vehicle is admitted into a repair shop, it may need to be test-driven. In the past, most test-drives were done on the road by a service technician; however, this is swiftly becoming the exception. Increasingly, automotive technicians are turning to more sophisticated diagnostic methods when determining the nature of a mechanical or electrical malfunction. While the diagnostic is

being conducted, the vehicle is positioned on a device called a dynometer. Whichever set of wheels causes forward propulsion in the vehicle (i.e., front wheels for front-wheel drive vehicles, and rear wheels on rear- wheel drive vehicles) is positioned on top of the dynometer's rollers that are flush with the garage floor and allow the wheels to turn while the engine is running. (Some dynometers may not be able to test all-time four-wheel drive or traction-control vehicles; with these types of vehicles, a "road test" may be required.) Essentially, the dynometer simulates a road test right in the shop by allowing the car to "run in place."

A diagnostic computer (called Semiu-tech by Snap-on/Sun), which is operated by the technician through a computerized console, is connected to the malfunctioning vehicle via a cord (every make of vehicle will require a different cord) to an outlet that is usually located under the dashboard and that has been placed there by the manufacturer for just this purpose. As it runs, the vehicle's internal computer system interfaces directly with the shop's diagnostic computer, and the nature and cause(s) of the problem(s) are pinpointed quickly (usually in less than a minute) and accurately.

Most repair shops will provide an estimate for their customers before performing any work, and verbal or written permission from the customer is typically obtained before any services commence. Most shops require vehicle owners to sign a standard "release form" to authorize the work that they want done beforehand. Some insureds use digital cameras to take a picture of the damaged or defective part; the photograph is then e-mailed or faxed to the customer who can e-mail, fax, or phone back and either authorize or decline to have the work done. Other shops may use computer simulations to show customers exactly what is wrong with their vehicle. Through three-dimensional computer graphics, the computer shows the customer where the problem lies and what driving problems they may encounter because of it.

Once the vehicle's problem has been determined, the necessary parts must be obtained so that work can begin. While some standard replacement parts may be kept on the premises (e.g., brake shoes and pads, shock absorbers, filters, etc.), most will be ordered from parts suppliers on an as-needed basis. Many shops will have a variety of suppliers that they deal with when buying aftermarket parts. These will include: auto dealerships; parts retailers and distributors (called "jobbers" within the industry); junkyards; and in rare instances, the parts manufacturers themselves. Any part that is not original equipment on a vehicle is considered to be an "aftermarket" part, even if it is made by the vehicle's manufacturer. Some aftermarket parts will be new, while others may be rebuilt (e.g., starters, alternators, transmissions, etc.) by the manufacturer.

Next, the necessary work is performed on the vehicle as per the owner's request or permission. If during the course of a repair job, it is discovered that more work may be required on the vehicle than was originally anticipated, shops will usually contact its owner for a second authorization before performing the additional work. Automotive fluids and substances that need to be replaced (e.g., motor oil, transmission fluid, antifreeze/coolant, and Freon) are typically drained from the vehicle, recaptured, and recycled through the use of specialized equipment, or are siphoned into appropriate tanks or containers until they can be properly disposed of. Most shops contract out the disposal of hazardous wastes to licensed contractors who specialize in such operations.

The price of the repair or service is generally determined by two factors: the cost of whatever part(s) or fluid(s) have been used in completing the repair, along with the cost of the technician's labor, which is usually calculated at an hourly rate and may be prorated on a quarter-hour basis.

One trend that has had a tremendous impact on the auto repair industry has been the increasing use of highly specialized, computerized equipment. Modern auto repair operations use diagnostic computers to interface directly with cars' internal computer systems. With such devices, technicians are able to pinpoint the exact cause(s) of a vehicle's specific mechanical or electrical problem(s), usually in less than a minute. These devices also help technicians to diagnose such problems with a far greater degree of accuracy than was previously possible. In addition, specialized software can simulate on a computer screen what is wrong with a customer's vehicle, allowing shop personnel to demonstrate for customers how a particular malfunction may be impairing the vehicle's drivability as well as scenarios of what could happen if these problems are not repaired.

In order to accommodate many customers' work-intensive lifestyles, some oil change centers now have trained technicians who operate specially equipped vans or trucks and drive directly to the home or workplace of vehicle owners, performing their services wherever it is most convenient for the customer. Such operations have an added advantage in that they can service a company's entire fleet of vehicles in just one trip, as opposed to the customer having to arrange for each vehicle to be driven to the oil change center for servicing.

Today's vehicles are equipped with more computers than the first spaceship. As a result, the amount of technical knowledge required of automotive technicians has increased dramatically in recent years. This fact, together with the rigorous training needed to successfully pass the appropriate ASE- certification tests that most employers expect, has resulted in a national shortage of qualified automotive technicians. This situation may soon reach crisis proportions as an increasing number of positions in an ever-expanding market remain unfilled. In response to the rising demand for skilled workers, many vo-tech schools are attempting to attract more female students to their automotive programs so that their numbers may grow in a field where the ratio of male to female workers has been consistently disproportionate.

The relevant trade associations for this industry include the Automotive Service Association (ASA, which may be reached at www.asashop.org) and the Automotive Oil Change Association (which may be reached at www.aoca.org). Related classifications include the Automotive Aftermarket Industry Association (AAIA, which may be reached at www.aftermarket.org), and the Women's Automotive Association International (WAAI, which may be reached at www.waai.com).

MATERIALS AND EQUIPMENT

Commonly used auto parts: oil filters, air filters, tires, wheels, hubcaps, auto batteries, spark plugs, various hoses and belts, brake shoes and pads, windshield wipers and/or replacement blades, etc.
Commonly used auto additives and accessories: windshield wiper fluid, antifreeze, motor oil, car wax, brake fluid, window decals, car air fresheners, etc.
Computerized diagnostic equipment; air compressors; pneumatic tools; powered and non-powered tools, such as drills, wrenches, screwdrivers, and other handheld tools; hand-operated portable jacks; hydraulic lifts; battery chargers; lubrication equipment; wheel alignment machines; body measuring/alignment systems; brake service equipment; engine diagnostic and/or reconditioning equipment; tire changing and repairing machinery and tools; transmission flush machine; dynometer; small chain hoists; telescopic oil drain; waste oil tank.
Miscellaneous: vending machines, computers, fax machines, cellular phones, photocopiers, coffee maker, stereo system or television (in waiting room area).

NARRATIVE LINES OF LIABILITY

Automobile Liability

Generally, automobile repair shops and oil change centers will experience a significant Automobile Liability exposure; however, this risk will be lessened if the insured does not offer towing services. For many insureds, employees may use personally owned vehicles to run errands, such as making bank deposits or picking up auto parts and/or supplies. Some repair shops loan out cars to customers while they are having their vehicles serviced there. Others will provide towing services and/or will have used vehicles for sale that customers will naturally want to test-drive. Some insureds may wish to combine their Automobile Liability and General Liability needs under a single Garage policy; in such instances, it is recommended that the underwriter also refer to the Garage Keepers' Legal Liability section of this classification.

What are the number, age, type, and condition of the vehicles owned by the insured? While some insureds may not own any vehicles at all, others may have one or more tilt-bed or tow trucks for transporting disabled vehicles and/or a fleet of loaner cars for use by customers while their own vehicles are being serviced. Some operations will own specially equipped vans or trucks that are driven to stranded motorists so minor repairs (e.g., change a flat tire, provide "jump" for a dead battery, etc.) can be performed at the scene of a breakdown; a growing number of oil change centers have similarly equipped vehicles that are used to perform preventive maintenance (e.g., oil changes) at customers' homes or workplaces. Some shops may also maintain a modest inventory of used vehicles for sale to customers. Even if the insured does own vehicles, some insureds will allow their employees to run business-related errands or attend professional training seminars using personally owned vehicles. In such situations, a nonowned vehicle exposure will exist. Confirm the existence of underlying personal insurance at acceptable limits, and obtain MVRs for all drivers.

What is the frequency of travel and radius of operations? If the insured owns and operates more than one facility at various locations, some management personnel may be required to travel between these sites on a daily or weekly basis. Bank deposits will also need to be made daily. Occasionally, employees may drive to various retailers or auto dealerships to pick up necessary parts or supplies, although such outfits usually offer free delivery. Insureds that provide towing services will often place a mileage limit on how far they are willing to travel for a towing job (e.g., no more than 30 - 50 miles from their base of operations). Similarly, if the insured sells used vehicles, it is recommended that test-drives do not go beyond 10 miles from the insured's base of operations.

What are the hazards of typical routes? Bad weather (e.g., fog, snow, ice), poor road conditions, traffic congestion, and travel along unfamiliar roads are some of the hazards that the insured's drivers will face. Tilt-bed and tow truck drivers as well as drivers of service vehicles will face an increased risk of inclement weather hazards since such conditions often contribute to accidents or breakdowns, resulting in vehicles being disabled and in need of a tow. In geographical areas where snow may be a concern, it is a positive underwriting sign if the insured's tilt-bed and tow trucks are equipped with front-end snow plows during the winter months. Accidents can cause extensive traffic backups along roadways; consequently, tilt-bed and tow truck drivers who are trying to reach the scene to pick up a disabled vehicle may be forced to drive along a median strip or the shoulder of a road. Are drivers thoroughly trained in the safe operation of these vehicles, even under such extreme circumstances? Some insureds may offer 24-hour towing or off-site repair services. If so, occasional nighttime travel will be required of employees who operate these vehicles, which can lead to driver fatigue as well as reduced visibility.

Have tilt-bed and tow truck drivers received proper training in the correct loading and unloading procedures for all types of disabled vehicles? Less experienced drivers should be paired with a more experienced operator until they have reached an acceptable level of competence. A loaded tow truck could respond sluggishly or handle awkwardly due to the weight of hauling another vehicle behind it. Are the insured's tilt-bed and tow trucks equipped with flashing yellow warning lights as a precaution to other motorists?

What are the age, training, and experience of the insured's drivers? Employees will generally range in age from 18 to 65. Some insureds will have high school-aged vo-tech students working for them as paid or unpaid interns; if so, a youthful operator exposure will exist. Allowing interns to drive any company-owned vehicles should be strongly discouraged as liability from resulting accidents will most likely fall to the insured. Are any of the insured's drivers under the age of 25? Only licensed drivers should be allowed to operate company-owned vehicles. [A commercial driver's license (CDL) is not usually required for tilt-bed or tow truck drivers.] Obtain MVRs on all of the insured's drivers. Since the Fair Credit Reporting Act requires written permission from the driver to obtain MVRs, the insured should make obtaining this permission part of the hiring process.

If the insured sells used vehicles or loans out vehicles to its customers who are having theirs serviced, then the Automobile Liability policy should be written to cover any third party damages that might occur during the operation of such vehicles (e.g., if an accident happened during a test-drive), regardless of who is operating the vehicle at the time of the accident. Are prospective buyers required to have an employee accompany them during test-drives? Before allowing customers to test-drive or borrow vehicles, a photocopy of their driver's license should

be made and kept on file. What is the insured's practice? For more information on this exposure, refer to the Automobile Liability section of the Automobile Dealers - New and Used - Retail classification.

Is there a vehicle maintenance program in place? Company-owned vehicles should be kept in good condition, repaired promptly as needed, and inspected regularly. What is the insured's practice? Unless they are experienced mechanics themselves, employees should not be allowed to repair or assist in the repair of any company-owned vehicles.

Automobile Physical Damage

Auto repair shops are likely to have at least one company-owned vehicle, and many will have one or more trucks that are designed to carry or tow disabled vehicles. Any specialized vehicles owned by the insured should be covered here. The Automobile Physical Damage exposure for repair shops will be significant. This exposure will be increased for insureds that maintain an inventory of used vehicles for sale since these vehicles will also be covered under this policy. Oil change shops, which usually do not offer towing, may not require this coverage unless they have specially equipped vehicles for performing services off site. Hazards will include driving in bad weather to retrieve stranded vehicles and navigating in and around accident scenes.

What are the age, type, and condition of the insured's specialized vehicles? Some insureds will have one or more tilt-bed or tow trucks for transporting disabled vehicles and/or a fleet of loaner cars for use by customers whose vehicles are being serviced. Some operations will own specially equipped vans or trucks that are driven to stranded motorists so minor repairs (e.g., change a flat tire, provide "jump" for a dead battery, etc.) can be performed at the scene of a breakdown. A growing number of oil change centers have similarly equipped vehicles that are used to perform preventive maintenance (e.g., oil changes) at customers' homes or workplaces. Some outfits may also maintain a modest inventory of used vehicles for sale to customers, which will also be covered here.

What is the frequency of travel and radius of operations? Insureds that offer towing services will usually have a limit on how far they are willing to travel for a towing job (e.g., no more than 30 - 50 miles from their base of operations). If the repair shop sells used vehicles, it is advisable to limit all test-drives to within a 10-mile radius from the insured's base of operations.

What are the hazards faced by the insured's drivers? Bad weather (e.g., fog, snow, ice), poor road conditions, traffic congestion, and travel along unfamiliar roads are some of the hazards that the insured's drivers will be exposed too. Tilt-bed and tow-truck drivers as well as drivers of service vehicles will face an increased risk of inclement weather hazards since such conditions often contribute to accidents or breakdowns, resulting in vehicles being disabled and in need of a tow. If the insured operates in an area where snow may be a concern, it is a positive underwriting sign if at least one company-owned vehicle is equipped with four-wheel drive and/or has an attachment for a front-end snow plow. Since accidents can cause extensive traffic backups, drivers who are attempting to reach disabled vehicles at an accident scene may be forced to drive along a median strip or the shoulder of a road. Drivers should be thoroughly trained in the safe operation of these vehicles, even under extreme driving conditions. If the insured provides off-site repair services, are personnel advised to place road flares both in front of and behind any disabled vehicles as an added precaution to passing motorists? Does the insured offer 24-hour towing or off-site repair services? If so, occasional nighttime travel will be required of some drivers. Nighttime driving can lead to driver fatigue as well as reduced visibility.

False Pretense coverage is strongly recommended for insureds that sell used vehicles since this will protect them in situations where they were led to believe that an individual was interested in purchasing a vehicle, but instead, that person steals the vehicle once possession of the car or its keys has been relinquished to him or her. The most practical loss control measure against this type of exposure is to ensure that all potential buyers are accompanied by an employee when taking vehicles for test-drives. Management should also require all personnel to make a photocopy of customers' driver's licenses before allowing them to take a test-drive. Under no circumstances should an unlicensed driver be allowed to test-drive vehicles.

Maintaining strict key control is also a crucial loss control measure against theft of used vehicles for sale. If keys to vehicles are kept on a keyboard, the board should be situated in an area that is inaccessible to customers. If lockboxes (i.e., small safe-like boxes that are attached externally and held in place by the vehicles' windows) are used, determine if the vehicles' keys are kept in the lockboxes overnight. Who has access to the lockbox keys? Are employees required to sign a sign-out sheet before accompanying customers on a test-drive? It is recommended that all keys to lockboxes and used vehicles for sale are stored during off-hours in a fire-resistant, NRTL-listed safe. What is the insured's practice? For more information, refer to the Automobile Physical Damage section of the Automobile Dealers - New and Used - Retail classification.

Does the insured have a vehicle maintenance program in place? All company- owned vehicles should be kept in good condition, repaired promptly as needed, and inspected regularly. Unless they are licensed mechanics themselves, employees should not be allowed to repair or assist in the repair of any company-owned vehicles. What is the insured's practice?

Where does the insured store its vehicles when they are not in use? Some insureds store their vehicles in a locked garage, while others may have a designated parking area on the premises. For most insureds, outdoor parking areas will not be fenced in; however, timed, outdoor floodlights are recommended at night in all outdoor areas where specialized vehicles may be parked. Are all specialized vehicles equipped with anti-theft alarms and permanently etched with a second set of concealed identification numbers that are registered with the National Crime Prevention Association?

Auto theft and vandalism may pose a problem for insureds that maintain a used car inventory. Vandals may paint graffiti on vehicles, break windows, slash tires, or tamper with engines. What measures have been taken to protect used vehicles from potential vandalism? The presence of outdoor surveillance cameras, outdoor floodlights, and "No Trespassing" signs are all positive underwriting signs. Please refer to the Automobile Physical Damage section of the Automobile Dealers - New and Used - Retail classification for additional loss controls.

General Liability: Premises and Operations

Visitors to automobile repair shops and oil change centers will face the possibility of slips, trips, and falls. Overall, the General Liability exposure for repair shops will be moderate. If customers are ever allowed into repair areas unescorted, this will increase the insured's risk. Conversely, oil change centers that require customers to remain seated inside their vehicles throughout the servicing procedures will experience a reduced exposure.

What is the layout of the premises? Most auto repair shops and oil change centers will be freestanding structures, although some smaller operations may have an adjoining facility. The layout of an automotive repair shop or oil change center will typically include a reception area or counter, two or more repair bays, a waiting area/lounge for customers, one or more offices, a stockroom where parts and supplies are stored, restrooms, and possibly a small kitchen or lunchroom for employees. Repair bays will be set up in two possible ways. Most repair shops and some oil change centers are single story facilities where vehicles are driven into the repair bays and then raised up on hydraulic lifts, if necessary. On the other hand, some insureds (particularly oil change centers) are two-story facilities with drive-in repair bays on the ground level and a work area for technicians situated directly beneath the bays at the basement level. Insureds that run side operations on the premises may also have a showroom where various auto parts, accessories, or tires are displayed for sale. Some outfits may provide a separate play area for children. At an increasing number of sites, secondary operations, such as a car wash, fast food restaurant, or convenience store, can be found. A separate garage for storing tow trucks and other company-owned vehicles may also be on site. Some insureds may operate several shops at various locations while others will maintain only one.

The hours of operation will vary, but most insureds will be open Monday through Friday from 8 a.m. to 5 or 6 p.m., although some may remain open later a few nights out of the week for their customers' convenience. Many insureds also have Saturday hours (which may or may not be shorter than typical weekday hours), but most will be closed on Sundays. Many repair shops experience increased business during the summer and winter seasons since hot and cold temperature extremes can contribute to greater wear and tear on engine parts and/or cause them to fail. Oil change centers seem to experience an increase of business during the summer months when motorists are driving their vehicles greater distances on vacations and day trips, resulting in the need for more frequent oil changes.

What are the average and maximum number of visitors to the premises daily? Depending on their scope of operations and the time of year, insureds will average between 20 and 50 visitors a day. They will include customers, delivery personnel, EPA inspectors, sales representatives from auto parts manufacturers, tow truck drivers (from off-site towing services), employees' family members, and vocational-technical (vo-tech) instructors who will be checking periodically on their student interns' performance. Vo-tech students who are working as paid or non-paid interns for the insured may be covered under Workers' Compensation or General Liability, depending on the applicable laws in the insured's state, and whatever contractual agreements have been made with the participating educational institution. Refer to the Workers' Compensation section of the Vocational-Technical Schools - Public and Private classification for more on this issue.

One of the main hazards faced by visitors to auto repair shops will be slips, trips, and falls. Good housekeeping measures can help to reduce the potential for such incidents. All areas that are accessible to the public should be kept free of debris and clutter. Trash should be removed from the premises on a daily basis. Electrical wires and telephone cords should not be stretched across aisles or walkways. What is the condition of the insured's flooring? Floors should be swept or vacuumed daily. Worn, torn, or loose floor coverings should be repaired or replaced promptly. Wet or oily spots on the floor could lead to slipping accidents. Have doormats been placed inside all customer entranceways? Puddles and spills should be cleaned up immediately using a grease-dissolving agent if necessary, and "Caution - Wet Floor" signs should be displayed over affected areas. If the insured maintains a showroom where merchandise is displayed, is there adequate aisle space between display racks and fixtures? Some outfits will contract out their maintenance services. If this is the case, what is the reputation and loss history of the insured's maintenance service company?

While some insureds permit customers to drive their own vehicles into repair bays, others will only allow their workers to do so. In particular, many oil change centers require customers to remain inside their vehicle while it is being serviced. If customers are ever allowed to enter auto repair/service bays on foot, are they accompanied by an experienced employee? If customers do wander into such areas, they will be exposed to the same types of hazards described in the Workers' Compensation section of this article, such as burns or skin irritation from contact with hot engine parts or motor fluids, and possible cuts from running machinery. Most shops do not allow customers into their office areas either. Have "Authorized Personnel Only" or "Employees Only" signs been posted at entrances to all restricted areas?

Does the insured have any electrical appliances located in its customer waiting areas? Many outfits will have stereos, televisions, vending machines, and coffee makers located in their customer lounge areas to help people pass the time while they are waiting for their vehicles to be serviced. Visitors may be exposed to electrical shocks from any of these devices. It is a positive underwriting sign if coffee machines are posted with signs asking customers not to operate them (other than to pour themselves a cup). Are all appliances properly grounded and NRTL-listed? It is a positive underwriting sign if the insured's television and/or stereo can be operated with a remote control since any shock received from a hand-held remote unit would usually be much milder than one from the equipment itself.

Visitors may be injured by furniture that is unsturdy or has sharp or pointed edges. The insured's furniture should be inspected periodically and repaired or replaced as necessary. Who is responsible for the maintenance and repair of the insured's furniture? Determine their reputation and qualifications. Some insureds will have a playroom or separate area designed for children where toys may be provided. If so, are all the toys in good condition and free of small pieces that could be pulled off and swallowed? All toys should have the Juvenile Products Manufacturers Association (JPMA) seal of approval. Are all toys that are provided in customer lounges or playrooms JPMA approved?

Delivery personnel should be restricted to areas that have been designated specifically for the loading and unloading of shipments (e.g., tires, spare parts, etc.). Some insureds contract out a service to replenish soiled uniforms and rags with fresh ones on a regularly scheduled basis. Delivery personnel from these services should not be permitted to enter auto repair areas. Does the shop have designated bins located outside its repair bays for holding soiled uniforms and/or rags that are awaiting pickup, as well as a separate bin(s) where fresh ones are dropped off?

How frequently does the insured receive vehicles in its repair areas that have been towed there by another towing service company? Drivers who are not employees of the insured may occasionally have to enter the repair area when delivering vehicles. If a vehicle is inoperable at the time of delivery, the tow truck driver should back it up into the repair area, unload it from the tow truck, and leave as soon as this task has been accomplished. If the vehicle being delivered is operable, there should be a designated area where such vehicles are to be parked until they can be serviced. Are signs clearly posted indicating where tilt-bed and tow truck drivers should unload any damaged or

disabled vehicles during off hours?

Some insureds may have car vacuums or air pumps for inflating tires on the premises. Most of these devices are equipped with an attached rack for hanging the hoses when they are not in use, but customers may be careless and leave hoses lying tangled on the ground after using them. It is a positive underwriting sign if workers are designated to check on such devices throughout the day and to recoil the hoses as needed. If the insured runs a car wash on site, are customers reminded to roll up all windows tightly before pulling into the facility so cleansers will not seep inside the vehicle?

Insureds that operate a gasoline station on site will face additional exposures. How frequently are gas pumps checked to ensure that they are functioning properly? "Out of Order" signs should be placed on any malfunctioning pumps until they can be serviced. At self-service gas pumps, are fueling instructions given in precise steps and explained in clear, understandable language? Some insureds will have racks of automotive products displayed nearby the gas pumps; if this is the case, they should be situated in such a way that customers are unlikely to trip over them while fueling their vehicles.

Self-service customers could also sustain burns if liquid gasoline or gas fumes were to ignite as a result of contact with a lit cigarette or engine sparks. Are "No Smoking" signs prominently displayed in all fuel dispensing areas? Signs should also be posted warning motorists to turn off their engine before fueling their vehicle and not to overfill or "top off" their gas tanks. Does the insured have all of these warning signs displayed at each of its gas pumps?

A chemical called benzene is a byproduct of petroleum and is a minor component of gasoline and diesel fuel. However, even short-term inhalation of benzene fumes has been shown to cause a variety of symptoms, such as nausea, dizziness, drowsiness, headache, and eye irritation. Some visitors may be particularly sensitive to benzene fumes and could experience symptoms even if every effort is made to reduce their exposure. Most gas pump nozzles are equipped with rubber collars to minimize escaping benzene fumes as the fuel is being pumped. Are all of the insured's pump nozzles equipped with rubber collars? Refer to the General Liability section of the Gasoline Stations - Full- Service and Self-Service classification for information on additional exposures that insureds selling gasoline products may face and suggested loss control measures.

Most insureds will have public restrooms. Where are the insured's public restrooms located? If they must be entered from outside the building, surrounding areas should be well lit and free of debris or clutter. Restrooms should be cleaned and sanitized daily. Are all public restrooms handicapped accessible?

What is the condition of the outdoor premises? Grassy areas should be mowed regularly, and paved areas, such as sidewalks and parking lots, should be well maintained. Have arrangements been made for the prompt removal of ice and snow?

Product Liability and Completed Operations

The most serious exposures under this line of coverage will be repairs or services that have been improperly performed, the installation of faulty parts, or passing a vehicle for a state inspection or emissions test that should not have passed. With any of these situations, an automobile accident could occur due to the insured's negligence, and a claim (possibly involving multiple claimants) could result. The Product Liability and Completed Operations exposure for automobile repair shops will be substantial. The primary exposures for oil change centers will be replacing an insufficient amount of oil or other automotive fluid (e.g., transmission fluid, coolant, etc.) in customers' vehicles, which could lead to engine damage. However, since their operations involve preventive maintenance services rather than the replacement of parts or more extensive repairs, this exposure will be reduced for oil change centers.

What are the training and experience levels of the insured's automotive technicians? The requirements of service technicians at most oil change centers will not be as rigorous as those demanded by auto repair shops. Although many oil change centers will have at least one ASE-certified automotive technician on staff, not all workers who perform services on customers' vehicles at oil change centers will possess the same level of expertise. Some workers may have completed related vocational-technical (vo-tech) courses or received certification from the Automotive Oil Change Association, while others will only have on-the-job training. By contrast, because the nature of their work often involves more complicated services and repairs, most technicians who are employed by auto repair shops will have received more intensive training from a vo-tech institution and are likely to be ASE-certified in at least one specialty area. How many ASE-certified technicians does the insured have on staff? It is a positive underwriting sign if at least one of the insured's automotive technicians is an ASE-certified master mechanic. Is there at least one experienced, ASE-certified mechanic on duty at all times? Student interns should never be allowed to perform work on vehicles unless they are under the direct supervision and guidance of an ASE-certified technician. What is the insured's practice? Due to the fact that automotive technology is constantly evolving, it is a positive underwriting sign if the insured encourages, requires, and/or helps to subsidize the ongoing education and training of all its mechanics, preferably for courses that are offered by auto manufacturers and/or are certified by the National Institute for Automotive Service Excellence (ASE). What is the insured's practice?

Does the insured install new, rebuilt, or remanufactured auto parts in customers' vehicles? If an accident was determined to have been caused by a faulty part that was installed, the insured is likely to be named as a co- defendant in any resulting claims, along with the part's manufacturer and/or distributor. Determine the reputation of the auto parts manufacturers and distributors that the insured deals with most often. Do these outfits offer any warranties or guarantees on the products that they make or sell? Some insureds may occasionally install parts that have been purchased from junkyards, particularly on older model vehicles when new parts are unavailable elsewhere. Such parts should be carefully checked since the vehicle they were taken from may have been involved in a collision, and the quality of the part could have been compromised. Who is responsible for checking auto parts that have been purchased from junkyards? It is a positive underwriting sign if all such parts are thoroughly inspected by an ASE-certified master mechanic and washed in a parts cleaning machine before being installed in any customer-owned vehicles. What is the insured's practice?

Some customers who are "do-it-yourselfers" may ask an insured to install a part that they have unsuccessfully tried to install themselves, offering to pay them for the labor charges. Does the insured ever perform jobs under these circumstances? Such practices should be strongly discouraged since the quality of the part being installed is unknown, yet the insured could still be held liable for damages in any resulting claims.

Many repair shops and oil change centers perform state inspections and/or emissions testing of vehicles. Claims could result where vehicles that should not have passed inspection caused an accident. If the insured performs state inspections or emissions testing, does it consistently comply with all state requirements regarding such inspections?

Does the insured service air conditioning (A/C) units on vehicles? Tanks of refrigerants should always be analyzed prior to being used in customers' vehicles. The presence of even a small amount of air (e.g., 1 - 2%) in refrigerants can not only reduce the A/C unit's effectiveness, but also has the potential to cause it irreparable damage. Samples of refrigerants should be tested upon arrival in the shop with a special device called an "identifier" that provides a detailed breakdown of which elements are present inside the tank and the amounts of those elements. Technicians should compare the in-shop analysis with what is listed on the tank's label to ensure product quality and purity. What is the insured's practice? Products that fail to pass this initial inspection should be returned to the supplier for replacement. If this is not possible, pure R-12 or R-134a can be added to the tank to bring it up to the accepted 98% purity level through a process known as "diluting by pollution." If the analyzing device has a printout feature, it is advisable that the insured maintain hard copies of all such analyses so that claims of damage to A/C units can be defended should a suit arise. Does the insured analyze and document the purity of all refrigerants prior to their use?

With oil change centers, the primary exposures will be not replacing a sufficient amount of oil or other automotive fluid (e.g., transmission fluid) when servicing a customer's vehicle, using the wrong type of oil filter, improperly attaching an oil filter, or overlooking an obvious oil leak in the vehicle. Any of these could lead to serious engine damage. For the first two exposures, the best loss control is the use of auto manufacturers' or parts manufacturers' books that list the recommended oil levels and filter types for every make and model vehicle on the road today. Some insureds maintain this information on software programs that are accessible from the same computer terminals where customer records are stored. The latter two problems can be addressed by ensuring that less experienced workers are paired with more experienced technicians until they have demonstrated an acceptable level of competence at handling the required tasks. What is the insured's practice?

How are customer complaints typically handled? Most insureds will offer to correct any problems they may have inadvertently caused while performing services or repairs. Does the insured offer any guarantees or warranties on its work for a specific number of days, months, or miles? If so, what warranties does the insured provide? Determine the shop or center's history and reputation for honoring its warranties. Some insureds that are part of a franchise or chain may provide warranties that are meant to be honored at any other affiliated location. For insureds where this situation applies, are warranties that have been issued by an alternate chain or franchise location consistently honored?

If the insured sells used vehicles, how thoroughly are these vehicles checked before they are put up for sale? Used vehicles should pass all required state inspections before being sold. It is a positive underwriting sign if the shop's own safety and mechanical inspections for used vehicles are more stringent than those mandated by the state. If vehicles are found to have any mechanical problems that could impair their safe operation or performance, all necessary repairs should be made to these vehicles before they are sold to customers. Does the insured offer warranties on any of the used vehicles that it sells? Determine the typical time and/or mileage limits on any warranties offered. It should be noted that "lemon laws," which are in effect in all 50 states, apply only to the sale of new vehicles, not used ones.

Repair shops that also sell petroleum products, such as gasoline and diesel fuel, could face claims resulting from the sale of "watered down" products. Some vehicle manufacturers may recommend that certain models only take a certain grade (i.e., octane level) of gasoline for optimum performance. Claims could arise if customers believe that they were sold "watered down" gasoline or a lower grade of gasoline than they actually paid for; engine damage could possibly result. Some states, such as Texas, have mandatory octane testing programs in place for all retailers of gasoline products to ensure that consumers are receiving the specific grade of gas for which they have paid. (More states are expected to enact similar legislation in the near future.) Does the insured comply with all mandatory state or municipal octane testing programs?

Some auto repair shops sell automotive accessories (e.g., stereos, wiper blades, etc.) and/or additives (e.g., windshield washer fluid, motor oil, antifreeze, etc.). If this is the case, determine the reputation and loss history of the shop's suppliers for such items. It is preferable if the insured sells primarily name brand products whose manufacturers offer quality guarantees on their products.

Many repair shops will have vending machines on the premises. If the insured sells food items out of vending machines, determine the vendor's reputation. Have any hold-harmless agreements been signed? What is the degree of liability assumed by the insured for items sold out of its vending machines?

Garage Keeper's Legal Liability

Garage Keepers' Legal Liability is a unique type of coverage intended for businesses that perform repairs or services on customer-owned vehicles and/or that offer towing services. This coverage provides protection in the event of claims filed for damages that occur to customer-owned vehicles and their contents while those vehicles are in the care, custody, and control of the insured. The Garage Keepers' Legal Liability exposure will be substantial for automobile repair shops and oil change centers, with the exposure increased for those that offer towing services. Oil change centers where customers remain inside their vehicles during servicing will face a reduced exposure. There are three types of protection from which the insured may choose: Legal Liability coverage, Direct Excess coverage, and Primary coverage.

Legal Liability coverage is the most limited form. It protects the vehicle against any damages that the shop or center could be held liable for, such as exterior dents caused while an employee was operating the vehicle. If the insured chooses to have this type of coverage, then customers who are dropping off vehicles for repair should be required to sign a standard automotive work order form that authorizes the insured to perform only the work specified and that absolves it from any loss or damage to the vehicle (or its contents) resulting from fire, theft, or other causes beyond the insured's control.

The second type, Direct Excess coverage, provides much the same protection as Legal Liability. However, it will also pay for any damage to the vehicle that its owner's coverage will not pay for (i.e., anything in "excess" of what the vehicle owner's insurance pays) on a claim for damage that was determined to be the insured's fault.

The third, and most comprehensive, type of Garage Keepers' Legal Liability is called Primary coverage. This pays for any damages

incurred to a vehicle while it is in the insured's care, custody, and control, even those resulting from an act of God. In preparing this line of coverage, the underwriter should consider whether the repair shop operates in an area that is prone to floods, tornadoes, hurricanes, and/or hailstorms where vehicles that are left on the premises for more than a day could be affected.

Loss control measures for this exposure would include making certain that customers do not leave anything of value inside vehicles while they are being serviced. The shop or center may wish to post signs stating that it is not responsible for articles left inside customers' vehicles. Also, keys to customer-owned vehicles should never be left inside cars during off-hours. Rather, whenever customer-owned vehicles must remain on the insured's premises overnight, it is recommended that the keys be kept on a keyboard or in a lockbox and stored in a secure location, such as a safe or office. Have all personnel been trained in proper key control methods?

Environmental Impairment Liability

Automobile repair shops and oil change centers generate a great deal of waste on a daily basis. Some of these wastes, such as old engine parts and tires, are not considered to be hazardous. However, many fluids and other substances, such as used motor oil and filters, refrigerants, and antifreeze, are considered to be hazardous and must be handled and disposed of according to all local, state, and federal environmental regulations. Therefore, the Environmental Impairment Liability for this classification will be moderate. This exposure is likely to be higher for insureds that store and dispense gasoline or diesel fuel on the premises.

Repair and preventive maintenance services will frequently result in leftover fluids (e.g., used motor oil, brake fluid, etc.) that must be properly disposed of in order to prevent environmental claims. Worn-out tires must also be recycled or disposed of. Most insureds will contract out the disposal of their used motor oil, oil filters, certain fluids (e.g., antifreeze, refrigerants), batteries (99.8% of an old battery is recyclable), and tires to independent contractors, who in turn transport them to appropriate recycling centers. (With batteries, many manufacturers of new batteries will accept used batteries from repair shops and oil change centers; this type of "swapping" is common since these batteries are then recycled and reused by the manufacturers.) However, if it is determined that a recycling contractor has not been following proper recycling procedures and resulting pollution charges are brought against the contractor, insureds could still be forced to pay part of the environmental clean-up costs, regardless of whether they had knowledge of the contractor's illegal activities. Examine all contracts signed between the insured and its recycling contractors. What is the degree of liability assumed by the insured? Determine the reputation and loss history of all contractors that the repair shop uses. It is recommended that certificates of insurance are collected from these contractors and that the shop or center ask to be named as an additional insured.

Used motor oil is usually stored in a holding tank while awaiting pickup from a recycling contractor. Larger repair shops and many oil change centers may have a storage tank for fresh motor oil as well. Ideally, these holding tanks should be aboveground and, if possible, situated outside the main building. How often are these tanks and the pipes that lead to them inspected for cracks or leaks? Some insureds will burn their used motor oil in an on-site heater that is used to heat the facility. What is the insured's practice? In addition, used oil filters should always be drained completely before being disposed of. The Coordinating Committee for Automotive Repair (CCAR) recommends the hot drain method, in combination with crushing or dismantling, for draining used oil filters.

In repair bays, spills involving motor oil can be quite common. While some insureds use a granular substance similar to cat litter for soaking up such spills, this practice could lead to a disposal problem since this may then be classified as a hazardous waste and must be separately drummed, labeled, and picked up by a hazardous waste hauler. Paper towels that have been used for such purposes should be similarly classified and disposed of. Therefore, it is preferable to use grease-dissolving solvents when cleaning up such spills. What is the insured's practice?

Nearly all repair shops and some oil change centers will have hydraulic lifts that are used to raise vehicles on an open platform so technicians can work on them from below. These lifts are powered by pistons and pumps, which raise and lower the platforms according to the amount of hydraulic fluid that is pumped into or out of them. Aboveground lifts are powered by a single pump and are individually equipped with a small tank of hydraulic fluid (generally about 10 - 11 quarts) that feeds directly into the pump. Underground hydraulic lifts, on the other hand, will typically have a larger tank of fluid that can hold as many as 5 - 10 gallons and that is connected by a series of underground pipes to one or more lifts' pumping units. If the shop's hydraulic tanks and pipes are situated underground, deterioration (e.g., rust) could occur that might cause leakage or seepage of hydraulic fluid into the ground, creating an environmental hazard. However, with aboveground hydraulic lifts, leaks in equipment can be more easily detected, cleaned up, and repaired, thereby reducing the possibility that the fluid could seep out and contaminate surrounding soil. Are the insured's hydraulic fluid tanks above- or underground? Determine who is responsible for maintaining the hydraulic lifts, fluid storage tanks, and all their component parts.

Many insureds use a parts washer to clean mechanical grease and grime off of reusable parts. Wastes generated from these machines are generally not considered to be hazardous, but should still be handled with care. According to the Environmental Protection Agency (EPA), insureds should consider using a two- stage cleaning system. The first stage should be used to clean only the dirtiest engine parts. The second stage should be used for final cleaning and rinsing, with drip racks or trays being used to help increase drainage and minimize solvent loss. When the cleaning solution in the first stage has lost its effectiveness, the solution from the second stage can be used to replace it. Fresh solvent is then added to the second stage. The installation of a solvent distillation unit is also recommended; this unit heats the cleaning mixture to vaporize and condense the solvent, returning it to the washer unit and leaving behind only the wastewater generated from the parts cleaning process. Another alternative to parts washers are aqueous (i.e., detergent-based) cleaning systems that use high pressure sprays and immersion baths with ultrasonics to filter out contaminants. These units can also be designed to separate and recycle both the cleaning agents and the water that is used.

Prior to disposal, all wastewater should be diluted so that applicable federal, state, and municipal requirements regarding permissible exposure limits (PELs) are not exceeded. Wastewater that is generated by parts washers can generally be discharged into regular wastewater treatment systems, provided that they meet the PEL requirements. What precautions has the insured taken to prevent hazardous fluids from entering its floor drains? Except during wash downs, have barriers been placed over floor drains to prevent accidental spills from entering them? If floor drains discharge directly into a municipal sewer system, has the insured notified the municipality of the potential for

contamination in its wash water? Most car wash units have been designed to recycle the water they use, so this exposure will be minimal for insureds that operate such a facility on the premises. Some insureds may have a water filtration system on the premises that separates oil and heavy particulates from wastewater before releasing it. Does the insured use such a system to filter its wastewater before releasing it? Determine the insured's methods of discharging its wastewater. How is the insured's wastewater analyzed before being released into public sewage systems?

For insureds that handle certain types of automotive fluids, such as transmission fluid and antifreeze (i.e., ethylene glycol, a sweet-tasting substance that is toxic to both fish and wildlife), in-house recycling equipment is commercially available. These machines capture the fluids and, through distillation and filtration processes, remove contaminants so that they can be re-injected back into customers' vehicles for continued use. If a recycling contractor is used to dispose of such fluids, they should be stored in separate, EPA-approved, tightly-sealed containers while awaiting pickup. What is the insured's practice?

Similarly, recycling equipment is also available for the two most common air conditioning (A/C) refrigerants, R-12 (also known as Freon, which is no longer produced in the United States due to evidence that it causes ozone damage) and the newer, more environmentally friendly R-134a. Many states require shops to hold special certification in the operation of refrigerant recycling equipment. If the insured services vehicles' A/C units in states where such statutes apply, does it hold the required certification to perform this type of work? Is disposal of used refrigerants contracted out to a qualified recycler, or does the insured have an in-house unit that enables it to reuse refrigerants in customers' vehicles?

Uniforms and rags that have become tainted with flammable or environmentally harmful substances, such as motor oil and antifreeze, present another possible exposure. Many insureds contract a service that launders and replenishes their soiled uniforms, towels, and rags on a regularly scheduled basis. The CCAR recommends storing soiled cloth items in specially designated, flame-resistant, metal bins or containers while they are awaiting pickup. Some insureds will burn tainted rags or paper towels with their used motor oil in an on-site heating unit, which is an acceptable alternative. However, it should be noted that, in general, the use of paper towels to clean up environmentally hazardous substances should be discouraged since this can create an additional disposal problem. Does the insured contract out to a laundering service, and if so, where and how are soiled uniforms stored while awaiting pickup?

Insureds that store and dispense gasoline or diesel fuel on site will face an increased exposure due to the recent discovery that serious environmental damage has been and is continuing to be caused by methyl tertiary-butyl ether (MTBE), an emissions-reducing additive that the EPA had once strongly urged be included in all gasoline products. A potential carcinogen, MTBE has been added to gasoline in concentrations of 8 - 15% since the early 1990s. However, it has proven to be capable of eating through tank and pipe seals on both old and new underground gasoline storage tanks, thus seeping into nearby soil and water supplies and causing contamination problems. MTBE is capable of traveling through soil very rapidly, is highly soluble in water, and is resistant to biodegradation. Undoubtedly, most gasoline retailers will contend that they have been following EPA auto emission-reduction guidelines by selling petroleum products containing MTBE. Even so, they could still be named as co-defendants in any resulting lawsuits. Does the insured ever arrange to have soil and water samples from surrounding areas checked for possible environmental contamination? If so, determine the frequency of such testing (semi-annual, or annual testing is recommended), as well as the qualifications, experience, and reputation of the outfit that has been contracted to perform these analyses. For more information, refer to the Gasoline Stations - Full-Service and Self-Service classification.

If the insured does store gasoline on site, has a tank monitoring system (TMS) been installed? In addition to automatically monitoring the fuel levels in each of the insured's underground storage tanks, the TMS continually runs air pressure tests on all tanks and connecting pipe systems to check for leaks and weak connecting joints. Some states have already enacted laws requiring all gasoline retailers to have a TMS installed, and other states are expected to pass similar legislation in the near future. Operated from a small, wall-mounted console, the TMS shows its readings in two possible ways, on an LCD screen or on a receipt-sized printout.

Workers' Compensation

Technicians who work for auto repair shops and oil change centers will use a variety of equipment daily that could cause electrical shocks. Technicians also work on raised vehicles, performing tasks that involve repetitive motions at or above shoulder level, which can result in work-related musculoskeletal disorders. Vehicles that have been involved in injury accidents may have dried blood on them, possibly exposing workers to bloodborne pathogens. Skin problems, such as eczema and dermatitis, can be common among mechanics due to frequent exposure to skin irritating agents. Respiratory problems could occur if ventilation systems are inadequate, and hearing loss may result from prolonged exposure to noisy equipment. Slips, trips, and falls may also occur. Consequently, the Workers' Compensation exposure for auto repair shops and oil change centers will be significant.

What is the layout of the insured's premises? Most auto repair shops and oil change centers will be freestanding structures, although some smaller operations may have an adjoining facility. The layout of an automotive repair shop or oil change center will typically include a reception area or counter, two or more repair bays, a waiting area for customers, one or more offices, a stockroom where parts and supplies are stored, restrooms, and possibly a small kitchen or lunchroom for employees. Repair bays will be set up in two possible ways. Most repair shops and some oil change centers are single story facilities where vehicles are driven into the repair bays and then raised up on hydraulic lifts, if necessary. On the other hand, some insureds (particularly oil change centers) are two-story facilities with drive-in repair bays on the ground level and a work area for technicians situated directly beneath the bays at the basement level. Insureds that run side operations may also have a showroom where various auto parts, accessories, or tires are displayed for sale. Some insureds will provide a separate play area for children. At an increasing number of sites, secondary operations, such as a car wash, fast food restaurant, or convenience store, can be found. A separate garage for storing tow trucks and other company- owned vehicles may also be on the premises. Some insureds may operate several shops at various locations while others will maintain only one shop.

The hours of operation will vary, but most will be open Monday through Friday from 8 a.m. to 5 or 6 p.m., although some may remain open later a few nights out of the week for their customers' convenience. Many insureds also have Saturday hours (which may or may not be shorter than typical weekday hours), but most will be closed on Sundays. Many repair shops experience increased business during the summer

and winter seasons since hot and cold temperature extremes can contribute to greater wear and tear on engine parts and/or cause them to fail. Oil change centers seem to experience an increase in business during the summer months when motorists are driving their vehicles greater distances on vacations and day trips, resulting in the need for more frequent oil changes.

How many workers does the insured employ, and what are their ages, experience, training, and duties? The number of workers employed by auto repair shops and oil change centers can range from 3 or 4 to as many as 30 or 40, depending on the size of the operation and whether or not the insured maintains more than one facility. Typically, most repair shops and oil change centers are active in the recruitment and training of new automotive technicians, since they are the ones who actually service customers' vehicles. Most automotive technicians (also known as mechanics) receive their training from specialized vocational-technical (vo-tech) programs offered by community colleges, high schools, or other post-secondary institutions. Some vo-tech schools require students to pass the appropriate ASE certification tests before they can receive their diploma, degree, or program completion certificate. Due to the fact that automotive technology is constantly evolving, continuing education for automotive technicians is essential if insureds are to remain competitive. Most shops provide at least partial funding of their technicians' continuing education that may include auto manufacturers' seminars, aftermarket parts manufacturers' seminars, or in-house training (e.g., provided by the franchise or chain with which the insured is affiliated). Approximately two-thirds of all repair shops are actively involved in internship programs with local vo-tech schools or community colleges. Other repair shop employees would include clerical and/or accounting personnel, a counter person who deals with customers and processes their repair orders, and/or (for insureds that sell used cars or have merchandise displayed in a showroom type of setup) one or two salespeople. In some cases, employees may operate as both salespeople and counter persons. Those that run secondary operations, such as car washes, convenience stores, or fast food restaurants, will require workers for those facilities as well. A more detailed description of workers' duties and exposures for these types of operations can be found in the Workers' Compensation sections of the appropriate classifications.

It is important to note that student interns may be covered under Workers' Compensation or General Liability, depending on the applicable laws in the insured's state, as well as whatever agreements have been made with the cooperating educational institution. For more information on this topic, refer to the Workers' Compensation section of the Vocational-Technical Schools - Public and Private classification. All student interns and new employees should undergo basic safety instruction as part of their training, and technicians should be thoroughly instructed in the use of any unfamiliar equipment before using it.

The most frequent claims filed are likely to be for injuries sustained as a result of slips, trips, or falls. Good housekeeping is an effective loss control. All areas, particularly repair bays, should be kept free of debris and clutter. Trash should be removed from the premises daily. Electrical wires and telephone cords should not be stretched across aisles or walkways; similarly, cords to all repair equipment in service bays should be neatly coiled and kept clear of walkways when not in use. What is the condition of the insured's flooring? Floors should be swept or vacuumed every day, and worn or loose coverings should be replaced as necessary. Many insureds will have concrete flooring in their repair bays; cracks and holes should be repaired promptly by a qualified professional. An epoxy coating over the concrete flooring can contribute to quick and easy cleanup of oily spills since grease cannot penetrate this type of coating. Are workers instructed to clean up oily spills immediately? A grease-dissolving agent or grease-absorbing substance is recommended for cleanup of spills involving motor oil or other greasy substances. Many repair shops will contract out their maintenance services for the facility. If this is the case, determine the reputation and loss history of the insured's maintenance service company.

If the insured's facility is designed so that technicians' work areas are below ground level, it is recommended that a bay net (i.e., a net made of nylon straps or ropes) be placed over each bay opening to prevent workers on the ground level from possibly falling into the technicians' area below. What is the condition of the stairs or elevators that are used to reach the facility's lower level? Stairs should be covered with non-slip treads and equipped with sturdy handrails. Are elevators regularly inspected and serviced by a qualified professional?

If the insured maintains a showroom where merchandise is displayed, is there adequate floor space between display racks and fixtures? All shelves should be solidly constructed with items neatly arranged and categorized for ease of location. A well-organized and maintained stockroom can also help to prevent injuries sustained from collapsing shelves or toppling objects. Determine the qualifications and experience of the individual who is responsible for overseeing the insured's stockroom area. Have all employees been familiarized with the insured's shelving system for backstock? If ladders are used to make higher shelves more accessible, the insured should be in compliance with OSHA standards 1910.25, Portable Wood Ladders, and/or 1910.29, Manually Propelled Mobile Ladder Stands and Scaffolds (Towers).

Because they are working with a great deal of electrically powered equipment, technicians in particular may be subject to electrical shocks. Is all electrical repair equipment NRTL-listed and properly grounded? Electrical wiring should be checked frequently for cracks and fraying by a qualified professional, and a routine schedule of inspections and maintenance should be in place. Is the insured in compliance with OSHA standard 1910.212, General Requirements for All Machines?

Auto technicians may experience cuts, lacerations, dismemberment, or burns from contact with moving or overheated engine parts, such as belts, chains, pistons, or radiators. Whenever possible, technicians should avoid working on hot engines. Where this is not possible, extreme caution and common sense should be exercised. Smoking should be strictly prohibited in repair bays since many automotive fluids (e.g., gasoline, motor oil) are highly flammable. Many shops do not allow their technicians to wear any jewelry while working, particularly rings and neck chains, since these could become entangled in moving engine parts, possibly resulting in a serious injury. Are workers required to keep long hair tied back or up inside a cap? What is the insured's practice? If the insured's technicians perform any welding on vehicles, proper personal protective equipment (e.g., masks, gauntlet-style gloves, specially treated, fire-retardant leather aprons) should be worn while such work is being done. For more information on this exposure, refer to the Workers' Compensation section of the Welding, Cutting and Brazing classification.

Does the insured ever perform repair work on vehicles that have been involved in injury accidents? If so, there is the possibility that dried blood may be present on the vehicle's upholstery or dashboard. While the HIV virus does not survive long in dried blood, the virus for hepatitis-B (i.e., a potentially fatal liver disease) can live in such a state for quite some time. Proper protection of workers who are in contact with such vehicles is an essential loss control. Rubber gloves and goggles should be worn at all times whenever technicians are working on a vehicle where blood is present. Special cleaners that specifically kill the hepatitis virus should be used to remove the blood, and workers should scrub with an anti-bacterial soap after working on such vehicles. The insured may wish to consider enrolling its technicians in Red Cross training courses that specifically address the issue of exposure to potential bloodborne pathogens in the workplace. Does the insured comply with OSHA standard 1910.1030, Bloodborne Pathogens?

Although a great deal of repair work on vehicles is performed while vehicles are situated on raised hydraulic lift platforms, occasionally

hand-operated jacks may be used to raise or lower one end of a damaged vehicle (e.g., to change a flat tire). If mechanics ever use slide boards to move under a vehicle that has been elevated with a jack, they could be crushed if the vehicle were to slip off of it. Are hand-operated jacks ever used to raise vehicles for service operations? Whenever possible, workers should use hydraulic lifts for raising and repairing vehicles since these devices are far more reliable than hand- operated jacks. All hydraulic lifts are equipped with one or more safety locks that are automatically activated when the lift has been raised to a certain height, such as three or four feet. (This height will vary from one lift to another, depending on the manufacturer's specifications.) The safety lock prevents a lift from dropping back down to the ground, even if its operating mechanisms or pumps should fail. Determine how frequently the insured's jacks and hydraulic lifts are inspected. What are the qualifications and experience of the individual who services the insured's hydraulic lifts? The insured should be in compliance with OSHA standard 1926.305, Jacks - Lever and Ratchet, Screw, and Hydraulic. Employees at two-story oil change centers where the technicians' work area is situated in the basement level beneath the service bays are less likely to encounter this hazard.

Workers may be subject to repetitive motion injuries (RMIs) and work-related musculoskeletal disorders (WMSDs) resulting from frequent use of computers, from extended use of equipment that gives off strong vibrations, from performing work while in an awkward position, or from lifting heavy objects improperly. Vibration has been associated with bladder dysfunctions, as well as other internal physical problems. Does the insured comply with OSHA standard 1926.302, Power-operated Hand Tools?

Technicians frequently have to work on vehicles that are positioned above their heads, or they may have to reach inside an engine and perform a task while maintaining an awkward position. Over time, problems such as rotator cuff damage to the shoulders, thoracic outlet syndrome, or other muscle strains that affect the neck and shoulder areas could result from these types of work activities. Office employees may experience repetitive motion injuries, such as carpal tunnel syndrome, from extensive use of calculators and/or computers. Are office workers encouraged to look away from their computer monitors and refocus on distant objects from time to time? Employers should follow standard ANSI/HFS 100-1988, which provides ergonomic design guidelines for visual displays, keyboards, and workstations. Workers in both of these types of situations should be encouraged to take a 15-minute break every 3 to 4 hours. What is the insured's practice?

Back injuries could result from workers using improper lifting methods. Tires may have to be removed from and placed back onto raised vehicles, and larger mechanical parts will sometimes have to be lowered into position inside a vehicle's engine. Where heavy lifting of tires, engine parts, or other materials is required, workers should be provided with proper materials-handling equipment, such as hoists, hand trucks, or dollies. Have all employees received instruction in proper lifting methods?

In the course of their duties, auto technicians will be exposed to a variety of automotive fluids and related substances. Some of these substances (e.g., motor oil, epoxies, adhesives, powders used in air bags) can cause eye or skin irritations, while others (e.g., antifreeze/coolant) are known to be toxic. The insured may wish to establish a policy that requires technicians to wear appropriate hand protection (e.g., latex gloves) and/or goggles whenever they are performing tasks where they could be exposed to potential eye or skin irritants. Are workers encouraged to wear appropriate hand protection, and engage in frequent hand washing? The insured should provide an appropriate strength, waterless hand cleaner so that workers will not overscrub hands that may already be irritated and thereby increase their risk of skin infections. Are repair areas equipped with at least one emergency hand- and eye-wash station? Does the insured comply with OSHA standards 1910.133, Eye and Face Protection, and 1910.138, Hand Protection? Most repair shops and oil change centers do not perform auto body or collision work. However, if the insured does perform such services, then the presence of paints and strippers that can cause severe respiratory problems and skin irritation will also be a concern. Refer to the Workers' Compensation section of the Automobile Body Shops classification for more information.

Proper ventilation in repair areas is also essential since vehicles emit potentially lethal carbon monoxide fumes when running. Some insureds will have special nozzles that drop down from the ceiling and fit over the end of a vehicle's tailpipe so that the exhaust fumes are funneled outside through a separate system of vents. Is the insured's repair area equipped with such a ventilation system? Other insureds may place a specially designed hose over the end of a vehicle's tailpipe and run it through a hole in the garage door. Is the insured in compliance with OSHA standard 1910.94, Ventilation?

Some automotive repair equipment can also be quite loud, which could lead to hearing loss. Workers who are exposed to noise levels at or above 85 dB must be given annual audiometric examinations and NIOSH-approved hearing protection devices if they request them. Workers who are exposed to noise levels above 90 dB must be issued and required to wear hearing protection devices. Does the insured conduct annual audiometric examinations? Such examinations may be used to establish a baseline for all employees against which later tests can be compared. Working in noisy areas should be limited to brief periods of time. Is the insured in compliance with OSHA standard 1910.95, Occupational Noise Exposure?

Tilt-bed and tow truck drivers and mechanics will face an increased risk of sustaining injuries resulting from automobile accidents; if the insured sells used vehicles, salespersons will also face this risk since they will be frequently accompanying customers on test-drives. Safety belts should be worn by all vehicle occupants, and mirrors and seating should be adjusted for the driver's comfort prior to engaging the vehicle. Technicians should be familiar with the operation of both manual and automatic transmission vehicles. When customers bring in vehicles for servicing, most problems can be diagnosed right in the shop on a device known as a dynometer. However, certain models (e.g., all-time, four-wheel drive or those with traction-control) may have to be driven on an actual road test to assess the nature of the mechanical malfunction. If a car is in need of repair, then its drivability may already be compromised, and the driver could be at greater risk. For both salespeople and mechanics, it is a positive underwriting sign if the insured has designated routes for test-drives, and discourages workers from using new or unfamiliar routes. Loaded tow trucks may respond more sluggishly, and drivers may frequently be called out to tow vehicles from accident scenes or during inclement weather (e.g., snow storms). Are tow trucks equipped with flashing yellow lights as a warning to other motorists? Less experienced tow truck drivers should be paired with more experienced ones until they get a feel for how the vehicle handles. Does the insured respond to all requests for towing, regardless of posted weather advisories?

Maintaining a comfortable work environment is essential to ensure worker safety and productivity for this industry. Due to the open design of service bays and the fact that garage doors are constantly being opened and closed throughout the day as vehicles enter and exit the facility, technicians will be more susceptible to illnesses caused by outdoor temperature extremes. Summertime heat can lead to dehydration, heat exhaustion, or heat stroke. Does the insured provide easy access to fluids for its technicians during warmer weather? Strategically placed water coolers, central air conditioning, and large overhead fans in repair areas are all advisable loss control measures. Temperatures that are below freezing can lead to such problems as frostbite (particularly in the extremities, such as fingers and toes) or hypothermia. Since gloves or mittens may impair technicians' abilities to perform certain tasks, the Automotive Service Association (ASA) recommends that repair shops

maintain a temperature of at least 60° F in all service bays during colder weather. Adequate lighting is also critical; not only will inadequate lighting affect an employee's ability to perform certain repairs properly, but it can lead to eyestrain. The presence of skylights and/or bright, fluorescent overhead lighting in repair areas are both positive underwriting signs. Office areas should also be well lit, particularly at work stations where computers are frequently used.

For insureds that also maintain a gas station on the premises, workers who dispense the fuel will be subject to various other work hazards including inhalation of benzene fumes and being the victim of a possible robbery attempt. Are all of the insured's pump nozzles equipped with rubber collars to help minimize exposure to benzene fumes? What is the insured's setup? The insured may wish to install outdoor floodlights and/or strategically placed surveillance cameras near gas pumping stations. Have employees been instructed to cooperate with robbers' demands and discouraged from displaying heroics during robbery attempts? For more detailed information on these exposures, please refer to the Workers' Compensation section of the Gas Stations - Full-Service and Self- Service classification.

What is the availability of emergency health care and first aid on the insured's premises? Have any employees undergone basic first aid training? Some states require that at least one employee at auto repair shops must be certified in basic first aid. Check the laws in the insured's state, and determine if the insured is in compliance with all applicable first aid requirements. It is a positive underwriting sign if the insured employs at least one full-time worker who is certified in CPR and first aid. Are first aid kits located throughout all repair areas, and are workers aware of their location?

Crime

The Crime exposure for auto repair shops will be minor since there will not be very much cash on hand. Due to the fact that they will tend to have a higher volume of cash transactions, oil change centers as well as insureds that sell gasoline or that run convenience stores, fast food restaurants, or car washes on site will face an increased exposure. Aside from cash, mechanics' tools that can have a total value of up to $40,000 will be another frequent target for thieves. An employee dishonesty exposure may also exist.

Most automobile repair shops will not have a great deal of cash on hand since the majority of customers pay for repairs and services in the form of personal check or credit card. However, because their services tend to be less costly and are often paid for with cash, oil change centers and insureds that have secondary operations, such as convenience stores, gas stations, fast food restaurants, or car washes, are likely to have a greater amount of cash on hand daily. Are all checks stamped "For Deposit Only" immediately upon receipt? Employees who handle customer transactions and purchases should be trained in proper credit card verification procedures. Checks, charge receipts, and cash should be stored in a tool-, torch-, explosive-resistant, NRTL-listed, time- delay safe until they can be deposited. To avoid suggesting a pattern, deposits should be made daily at staggered times.

Other than cash, what types of valuable items can be found on the premises? All automobile repair shops and oil change centers will have mechanics' tools. A complete set of tools for a master mechanic can be valued at as much as $40,000 and can be a frequent target for thieves. Most of these tool sets will be the personal property of the auto technicians and will be discussed under Inland Marine under a special policy known as Employee Tools coverage. Depending on their scope of operations, some insureds may also have various automotive products and accessories, tires, and/or used vehicles for sale, while others may operate a convenience store on site. Whenever possible, outdoor displays should be moved inside to a secure location during off hours. Are shelves of merchandise positioned so that counter personnel have a good view of them? The insured may wish to install concave mirrors or closed circuit cameras so that counter clerks can keep a better watch over areas where merchandise is displayed. Some insureds may sell gasoline, and customers could drive off without paying for their fuel. Are gas pumps self-service or full-service? A policy whereby customers must pre-pay for their gasoline purchases can greatly reduce this exposure. The insured may also wish to install outdoor surveillance cameras as an added loss control measure. Customers' vehicles that have been left on the premises overnight may be subject to theft as well. This exposure, along with recommended loss controls, is discussed in the Garage Keepers' Legal Liability section of this article. Measures to protect used vehicles that are owned by the insured can be found in the Automobile Physical Damage section of this article.

What is the level of security on the insured's premises? Windows should be equipped with tamperproof locks, and all doors (except for automatic doors, which are often found in convenience store setups) should have double-cylinder, deadbolt locks installed. A central-station alarm monitoring system is recommended. Some insureds may have a guard dog on the premises during off hours. Are guard dogs kept chained or inside an appropriate size kennel when not guarding the premises? They should not be allowed to roam about the premises freely as this could potentially increase the insured's General Liability exposure if intruders were bitten. What is the insured's practice? For insureds that operate convenience stores, gas stations, or fast food restaurants as part of their setup, are any of these facilities open during hours of darkness? If so, are the outdoor premises well lit at night? All cashier's booths or counter alarms should be equipped with a hold-up alarm and/or telephone so police may be contacted quickly in the event of a robbery attempt. (For more information on the various exposures that are unique to these types of operations, consult the Crime section of the appropriate classifications.)

An employee dishonesty exposure may exist. Are periodic, unannounced inventories conducted on in-stock auto parts and other merchandise (e.g., tires, automotive accessories, etc.)? It is a positive underwriting sign if the insured maintains a complete merchandise inventory list and/or tracking system on a computer database. If possible, accounting functions should be performed by more than one employee. Are periodic, unannounced audits conducted? Thorough prescreening of job applicants should include reference and employment checks. If the shop or center occasionally has paid or unpaid interns working for them, it is advisable that management interview these individuals beforehand, just as they would any other potential employee.

Determine the location and response time of the local police department.

Fire and E.C.: Property

Possible ignition sources for automobile repair shops and oil change centers will include faulty wiring, sparks from malfunctioning electrical equipment, and smoking. The fire load will include flammable petroleum products, such as motor oil, trash, and furniture. Overall, the Fire and E.C. exposure will be significant. This exposure will be increased for insureds that store and/or dispense gasoline on the premises. A moral hazard may also exist.

What are the type, age, and condition of the insured's building(s)? Most repair shops will be freestanding structures, although smaller operations may have one or more adjacent facilities. Many facilities are fairly modern and are likely to have been designed and constructed to suit their intended purpose. Even where the external structure of a facility is of an older construction, interior repair bays may have been remodeled at some point in order to comply with current applicable OSHA safety standards. Buildings that have adjoining structures should be separated by a firewall that extends to the ceiling.

What is the layout of the insured's facility? The layout of an automotive repair shop or oil change center will typically include a reception area or counter, two or more repair bays, a waiting area/lounge for customers, one or more offices, a stockroom where parts and supplies are stored, restrooms, and possibly a small kitchen or lunchroom for employees. Repair bays will be set up in two possible ways. Most repair shops and some oil change centers are single story facilities where vehicles are driven into the repair bays and then raised up on hydraulic lifts, if necessary. On the other hand, some insureds (particularly oil change centers) are two-story facilities with drive-in repair bays on the ground level and a work area for technicians situated directly beneath the bays at the basement level. Insureds that run side operations on site may also have a showroom area where various auto parts, accessories, or tires are displayed for sale. An increasing number of insureds now have additional operations, such as a car wash, fast food restaurant, or convenience store, as part of their overall setup. A separate garage for storing tow trucks and other company-owned vehicles may also be on site.

Most insureds will have a heavy electrical load due to the large amount of electrically powered equipment that is used. Is the insured's electrical power supply and wiring sufficient to meet its needs? Wiring should be in compliance with NFPA 70, National Electrical Code and should be periodically inspected by a licensed electrician. How often are electrical equipment and wiring inspected? An improperly designed or inadequate electrical system could cause fires if the load is too heavy for it. If the insured operates out of an older structure, what, if any, rewiring has been done? Assess the electrical load and the condition of all wiring.

It is vital that all electrically powered equipment, such as diagnostic and repair machines and handheld power tools, be properly grounded and NRTL-listed. Sparks given off by frayed or cracked wires or cords might start a fire that could spread very quickly, due to the presence of flammable petroleum products, such as motor oil. What are the age, type, number, and condition of all electrical equipment used by the insured? Is there a routine maintenance and inspection plan in place for all such equipment? Determine the qualifications and experience of the individual who performs these services. As much as possible, are flammable or combustible substances stored at safe distances from such equipment?

If the insured runs a secondary operation on site, such as a gas station or convenience store, space heaters that may be used in cash booths or food preparation equipment that is used for heating food could present additional ignition sources. If such operations are part of the insured's setup, the Fire and E.C. sections of the Gasoline Stations - Full-Service and Self-Service and Convenience Stores and Delicatessens classifications can offer loss control measures for these exposures.

What is the insured's smoking policy? Most insureds will enforce strict policies regarding smoking on the premises. Have "No Smoking" signs been posted in all areas where smoking is prohibited, particularly in repair bays? Where smoking is allowed, self-closing, fire-resistant receptacles should be provided. What is the insured's practice?

What is the insured's fire load? The fire load for most auto repair shops will include furniture, paper, oily rags and uniforms, motor oil, and trash. For some insureds, the fire load may also include a supply of gasoline. Good housekeeping is an essential loss control measure. Aisles and walkways should be free of debris and clutter, and trash should be removed on a daily basis. Some insureds may contract out their maintenance services. If this is the case, determine the reputation and loss history of the maintenance service company. Many shops and centers will contract out laundry service for their soiled uniforms and rags. At the end of workers' shifts, items such as these that have become tainted with petroleum-based liquids or other flammable substances, should be kept in specially designated, fire-resistant, metal bins or containers (preferably outside of the main building) until they are picked up for laundering or properly disposed of. What is the insured's practice?

Many insureds will have concrete flooring in their repair bays; cracks and holes should be repaired promptly. An epoxy coating over the concrete flooring allows for quick and easy cleanup of oily spills since grease cannot penetrate this type of coating. Particularly in repair bays, spills involving motor oil can be quite common. Are workers instructed to clean up oily spills immediately? While some insureds may use a granular substance to soak up such spills, this may lead to a disposal problem. Therefore, it is preferable to use grease- dissolving solvents when cleaning up such spills.

Stockrooms, repair bays, and gas dispensing areas may be particularly susceptible to rapid fire spread due to the presence of flammable or combustible liquids or gases, such as motor oil or acetylene, which is commonly used in welding torches. Are all such substances stored at safe distances from potential ignition sources? The insured should comply with OSHA standard 1910.106, Flammable and Combustible Liquids. Used motor oil is usually stored in a holding tank while awaiting pickup from a recycling contractor. Oil storage tanks should be situated outside the main building, and should be inspected regularly for signs of cracks or leaks. Some insureds may also have a gasoline pump and underground storage tank on the premises. A "no smoking" policy should be strictly enforced in all areas where flammable liquids are stored or dispensed. Does the insured store all fuel and other flammable liquids in compliance with NFPA 30, Flammable and Combustible Liquids Code? Refer to the Fire and E.C. section of the Gasoline Stations - Full-Service and Self-Service classification for additional information.

Some types of plastic furniture that may be found in customer lounge areas could emit noxious fumes if ignited, and rubber tires will emit thick, toxic smoke while burning. In either situation, fire fighting efforts could be severely impeded. Is the insured's furniture made of fire-resistant materials? If the insured maintains a supply of tires on the premises, how and where are they stored? It is preferable to keep tires on raised, horizontal racks, rather than stacked in vertical columns on the floor.

What are the values exposed to loss? Valuable items will include automotive diagnostic and repair equipment, computers, valuable papers and records (e.g., repair orders and invoices, customer files, stock inventories, etc.), possibly one or more tilt-bed or tow trucks, and/or an inventory of used vehicles. The first three are covered under Inland Marine policies, while company-owned vehicles and used automobiles will be protected under the Automobile Physical Damage policy.

What are the age, type, and condition of the insured's fire detection and suppression system? It is recommended that automatic sprinkler systems and smoke detectors be installed throughout the premises. Fire extinguishers should also be located conveniently, especially in repair areas. Annually tagged, Class ABC fire extinguishers should be located throughout the premises. Have all employees been properly trained in their use? In repair bays, it may also be advisable to have Class D fire extinguishers or buckets of sand, since either of these can be used to put out fires involving burning metals.

Has the insured taken part in any pre-fire planning? If so, how often is this plan practiced and updated? Determine the response time of the local fire department.

Vandalism to tilt-bed or tow trucks and/or used vehicles that are stored outdoors may also pose a problem. What measures have been taken to protect vehicles from this exposure? The installation of strategically placed outdoor surveillance cameras and floodlights, along with regular police patrols is suggested. For more information concerning this exposure, refer to the Automobile Physical Damage section of this article.

It is possible that a moral hazard may exist. Determine how long the insured has been in business. What is its financial situation? The underwriter should examine the insured's financial statements for the last three to five years to determine any possible problems. What is the level of competition in the area?

Business Interruption

The location of an auto repair shop or oil change center will be more vital to its continued business than its reputation since, on average, over three- quarters of their customers are repeat clientele. The replacement of vital diagnostic or repair equipment could be costly and may take some time. Overall, the Business Interruption exposure for this industry will be minor.

Are the insured's premises owned or leased? Most auto repair shops and oil change centers are private enterprises that are independently owned and operated, although they may sometimes be situated on property that is leased. Some insureds are affiliated with national or regional chains or franchises. In such cases, the property may either be owned by the franchisee or by the franchising company, which in turn leases the property to the independent franchise operator. Some insureds will maintain several shops or centers at various locations.

In the event of a loss, is the insured more likely to rebuild or relocate? Most insureds will probably choose to repair or rebuild rather than relocate due to the fact that a substantial percentage of their business comes from repeat customers living within a 30-mile radius. A lengthy business interruption could have a long-lasting impact on future business since longtime customers could get into the habit of having their vehicles serviced elsewhere while the insured is undergoing repairs. How long would it take to rebuild or repair the facility in the event of a loss? Could the insured continue any part of its operations (e.g., selling automotive accessories or running a car wash) while repairs were being made?

Does the insured rely more on its location or reputation for business? Most insureds will be dependent on both their reputation and location. Typically, both auto repair shops and oil change centers have an established, loyal clientele base within their immediate area. Many rely heavily on repeat business from locals, and consider "word of mouth" (i.e., reputation) to be their best advertising. This may be especially true for insureds that sell branded gasoline products or that are affiliated with a national or regional franchise or chain, since this can add a strong customer-recognition factor.

How quickly can materials, supplies, and equipment be replaced? Most standard automotive supplies (e.g., oil filters, wiper blades, fluids, etc.) could be quickly replaced from local auto supply retailers. Most parts used for repairs are purchased from parts manufacturers and retailers/wholesalers on an as-needed basis according to the demands of a particular job. However, insureds that specialize in certain types of repairs, such as brake repairs, may keep a larger supply of frequently needed parts on hand. Also, insureds that run secondary operations, such as selling tires or car stereos, may also maintain a moderate- to large-sized inventory of these items on site. Some diagnostic and repair equipment can be quite costly to replace. Does the insured maintain a supply of key replacement parts for all vital equipment? Many insureds will acquire service contracts from the equipment's manufacturer at the time of purchase; such contracts typically cover mechanical breakdowns, but would probably not protect items from damage caused by natural disasters. Does the insured typically purchase such contracts when buying essential equipment?

Does the insured experience a peak season? Most auto repair shops experience an increase in business during the winter and summer months since engines tend to experience more problems when being driven in extreme temperatures. Those that offer towing can expect to see an increase in this line of the business during the winter months (in northern climates) when weather-related accidents are more common. Oil change centers tend to experience an increase in business during the summer months when motorists are driving their vehicles greater distances on vacations and day trips, resulting in the need for more frequent oil changes. How much of an effect would a loss during the insured's peak season have on its business?

Inland Marine

Automobile repair shops and oil change centers will have a great deal of costly equipment and machinery on hand that is used for either diagnosing mechanical problems or performing services and repairs; therefore, an Equipment Floater will likely be essential. Employee Tools coverage is also recommended to protect technicians' tools that are stored on the premises. Computers are an integral part of many insureds' operations, and Electronic Data Processing (EDP) coverage would be advisable for those that rely on them. Valuable Papers and Records coverage may also be necessary. The Inland Marine exposure for automobile repair shops and oil change centers will be significant.

An Equipment Floater will be required to protect automotive diagnostic, service, and repair equipment that is not permanently situated since these items can be quite costly to replace. Does the insured keep essential replacement parts for vital automotive equipment on the

premises? It is a positive underwriting sign if the insured purchases a service contract from the manufacturer when buying such equipment. Does the insured have a routine maintenance program in place for all essential equipment? Determine who is responsible for inspecting and maintaining this equipment.

Most full-time automotive technicians are expected to supply their own tools upon being hired. A complete set of tools owned by a master mechanic can be valued at up to $40,000. When multiplied by the total number of mechanics employed, this can be a substantial exposure. Therefore, Employee Tools coverage is strongly recommended. While it is unusual in other industries to insure the property of employees, this is common practice for operations such as these. It is essential to determine the estimated value of all tools owned by the shop's automotive technicians. Losses can occur in many ways; however, the most common type of loss occurs as the result of breaking and entering, where thieves have mechanics' tools as a specific target in mind, break into the premises, and steal several sets all at once. Loss control measures would include the use of outdoor surveillance cameras and floodlights around the premises, and the installation of a central-station alarm monitoring system. How often do police patrol the area?

Nearly all auto repair shops will keep detailed computer files on customers' vehicles that have been serviced or repaired there. Insureds that sell gasoline may also use a computerized console to operate gas pumps and track daily sales of petroleum products. Those that sell other types of merchandise on site (e.g., tires, wheels, parts, accessories, etc.) may also use computerized cash register systems for tracking store inventory. In the case of franchised operations, the shop's computers may be linked to the franchiser's mainframe computer database. Since computers are often essential to this business, an EDP policy is strongly recommended. It is a positive underwriting sign if the insured has identification numbers etched on all of its computers, computerized gas pump consoles, and/or cash registers. Are all computerized systems equipped with surge protectors? Backup copies of all vital data and software should be stored off-premises in an NRTL-listed, fire-resistant safe. While many insureds may choose to cover their data processing equipment under a combination of Boiler and Machinery and Property policies, an EDP policy may still be necessary.

In lieu of Bailee coverage for vehicles left in the care, custody, and control of the insured while towing, repairs, or services are being performed, repair shops and oil change centers will require a special line of insurance called Garage Keepers' Legal Liability. Refer to that section of this article for more information on this line of coverage and the recommended loss control measures.

The insured may also wish to consider Valuable Papers and Records coverage for important documents, such as customer records and repair warranties. All essential documentation should be kept in a fire-resistant, NRTL-listed safe, and copies of these documents should be kept in a similar type of safe off premises. What is the insured's practice?

An Outdoor Sign Floater may be necessary. Does the insured have an outdoor sign on the premises? If the insured has a sign, what is its type and condition? Outdoor signs are subject to damage from wind and vandalism. Is the sign freestanding or securely attached to the building?

UNDERWRITER'S CHECKLIST

- [ ] Are towing services offered? If so, how many tilt-bed or tow trucks does the insured own?
- [ ] Does the insured sell used vehicles from the premises?
- [ ] Does the insured operate any full-service or self-service gasoline pumps on site?
- [ ] Are any guarantees or warranties offered on parts or labor for jobs performed?
- [ ] How frequently does the insured install rebuilt or remanufactured parts in customers' vehicles? Does the insured ever install parts that have been obtained from junkyards?
- [ ] Are signs posted warning customers that the shop is not responsible for any items left inside their vehicles?
- [ ] How are used tires, automotive fluids, batteries, motor oil, and soiled uniforms or rags disposed of? Are recycling and/or laundry services contracted out?
- [ ] If the insured performs services on air conditioning units, does it hold the necessary certification where required by state law?
- [ ] Does the insured ever work on vehicles that have been involved in accidents? If so, what precautions are taken to protect workers from exposure to bloodborne pathogens?
- [ ] Is a guard dog used to protect the premises during off hours?
- [ ] Are all flammable substances stored at a safe distance from potential ignition sources?
- [ ] How quickly could materials, supplies, and equipment be replaced in the event of a loss?
- [ ] What is the level of computerization in the insured's daily operations? Is any specialized software used?